

JOURNAL

OF THE

UNITED STATES CAVALRY ASSOCIATION.

VOL. III.

MARCH, 1890.

NO. 8.

GENERAL HARNEY.

THE career of WILLIAM SELBY HARNEY, as a cavalryman, began in 1836, when General JACKSON appointed him Lieutenant-Colonel of the newly raised Second regiment of Dragoons, which had been called into service for the better protection of our frontier. Previous to that time American Cavalry was without traditions, and although the country had been through two wars, it was almost without a history. Since then its record has been brilliant and instructive; its examples of soldierly spirit and devotion have been offered on many fields; free from the influences of custom and prejudice, it has become a type of our own, and a model to which all future cavalry must conform. Of peculiar interest, then, is the life of one whose years of active service saw the first struggles of this new arm, and who was able in after life to follow its progress up to our own day.

At the time of which we speak HARNEY was thirty-six years of age, with eighteen years of service in the infantry, in which he had gained a wide and varied experience as an Indian fighter and a reputation for all soldierly qualities. He had served on the staff of General JACKSON in Florida; in the Black Hawk war, he had been a trusted lieutenant of General ATKINSON and had largely influenced the decisive result, by personally reconnoitering and locating the Indian position in the campaigns of both years.

He was spare and trim of figure, of uncommon height, alert, active, swift of foot and strong of limb. His renown in feats of strength and exercise reached far and wide. He was red as a fox, about the head and face, with blue eyes and a ringing voice. He was of a kind to inspire the devotion of his soldiers and to fill the eye of the multitude as a popular hero; yet he was not all made up of goodness, being quite human in the warmth of his friendships and a right hard hater always; somewhat ferocious, too, in the award of punishment, as we see when he ordered that thirty deserters captured in the hostile ranks should not be executed until they should see the stars and stripes waving over a Mexican stronghold, or when, with grim confidence, he carried rope along on an Indian scout for the purpose of hanging the offenders.

Little time was given for drill and instruction, and in a few months from the passage of the act of Congress creating the new regiment, its detachments were fighting veteran Seminole warriors in their own homes under their chosen chiefs. In one of these engagements Colonel HARNEY commanded four troops of dragoons in the defense of Fort Mellen, Florida. At General JESSUP's battle on the Locha-Hatchee, HARNEY crossed the river with a few dragoons, and succeeded in attacking the enemy in flank and rear so as to cause their retreat.

One of the most dramatic incidents of the Florida war was the massacre of the trading post on the Caloosahatchie. A stipulation of one of the numerous treaties with the Seminoles was that a trading post should be established at Charlotte Harbor on that stream. HARNEY was charged with the execution of this part of the programme, and posted a guard of a sergeant and twenty-six dragoons. He then went over to the Department Headquarters at Tampa Bay, with the object of getting a larger force as guard, but, being unsuccessful, returned. Meanwhile the Indians were suspicious of treachery, through certain indiscreet actions of our government. Imagining that HARNEY was responsible for the suspected perfidy, they were planning vengeance, while he was unconscious of the whole affair. The scenes that followed are thus described by Colonel REAVIS in his History of St. Louis:

BILLY BOWLEGS came down to the boat and told him that the chiefs wanted to see him. HARNEY replied that he would wait and see them. It was afterward known that this was a ruse to shut off any possible chance of his escaping the massacre they were planning. A sergeant and the traders at the post came on board, and HARNEY conferred with them as to the behavior of the Indians. Their tone of confidence in the good intentions and peaceful disposition of the In-

dians did not please him, and he cautioned them against any relaxation of vigilance. Intending to review the disposition made of the troops, he lay down in his tent to rest, but long exposure in the hot sun had made him unusually tired, and he slept soundly until awakened in the morning by firing and the yelling of Indians. Rushing to the front of his tent, he saw his men being slaughtered and without arms, some of them struggling in the water and being killed with their own guns. His first act was to get on his boots; his next resolve was to die with his men. But there were no men there. Those who were not killed were scattered fugitives, without arms, and the instinct of self-preservation made itself felt, with no duty to come in conflict with it. That the Indians had risen was apparent when he first heard the noise, but he was entirely ignorant of the cause. With the desire to save himself, he yet saw no way, until, as an inspiration, the thought came. Running down to the edge of the bay, distant about two hundred yards, he walked into the water and then walked backward, out again to the shore, thus conveying the impression that two men had walked in. As he disappeared in the underbrush of the shore, he heard the baffled yell of the Indians as they entered his tent. They had stopped to plunder in the quarters of the men and delayed sufficiently for him to get a start. On reaching the point where he entered the water, they concluded that he and a companion had drowned themselves rather than be killed by them. A negro, who was with them and who was friendly, but who was yet more attached to HARNEY than to them, also did what he could to mislead them—and so give him valuable time. With all the Indians' confidence in his power, and respect for his soldierly qualities, there was mingled too, a superstitious fear that made them wary and increased his chances for escape. One of his men, who had noticed his stratagem while hidden in the palmetto thicket on the shore, soon joined him in his painful and perilous march. His objective point was a lumber pile, fifteen miles away from camp, much of the distance over mango roots that made the walk distressing. In the operations of the four preceding days the lumber pile had borne some part. To reach this point (that might already be in the hands of the Indians,) required, on his part, all the address and endurance that were possessed by his savage foe. He had to make experimental trips to the water, to learn his location; and if he met any Indians, his safety depended on seeing them first. On one of these reconnoitering trips, BRITTON, the man who was with him, reported that he had discovered the Indians.

"BRITTON," said his Colonel, "do you feel that you can fight?"

"Yes, sir, I will die with the Colonel," stoutly replied the man whose business it was to fight, though they had both but lately passed through scenes that chill the marrow of brave men. They had seen their comrades killed without any chance to make a defense.

The Colonel then said: "Let us cut some of these pointed limbs to make them cautious in approaching us. They will make good weapons, too, when they come close."

The next step was to cut some of the luxuriant grass and bind it

about their heads as a protection against the blistering sun, and then to reconnoiter the enemy, so as to get the first sight and keep themselves hidden. To raise his head above the bank was the labor of minutes, and the first thing that he saw was his canoe. In the canoe, if not disturbed, he knew there should be a harpoon, which he used in his hunting expeditions, and the present occasion would make it a very effective weapon. On reaching the canoe the harpoon was there, and Colonel HARNEY's gratification expressed itself in a yell that made the sluggish forests of Florida resound for miles. Some afterward said they heard it five miles distant. He was again a Christian warrior with a canoe beneath his foot, and a trusty though somewhat peculiar weapon in his hand, and he could yet exercise the prerogatives of commander—the succor of fugitives, and attention to his dead. Instructing BRITTON in paddling the canoe, the two paddled on until they overtook a boatload of their own men,* and then Colonel HARNEY announced his intention of going back to see what had become of his force that very night, even if he had to go alone. The men, though badly demoralized, volunteered to go with him though he would not order them to do so. The night was a bright moonlight one, the worst possible for his purpose. His whole force consisted of seven men with insufficient arms; yet he made the reconnoissance with five men and two guns, and collected and counted the dead for the purpose of gaining tidings of the living. He looked in the faces of the men and found them all but five. Goaded by the ghastly sight around him and a soldierly desire to avenge his comrades at once, he was anxious to make an attack upon the Indians that night in their camp. Colonel HARNEY relied upon a surprise, and the fact that two barrels of whisky, that they had found in the sutler's stores, had probably placed most of them in a position that would keep them out of a fight. There were but five men in the party, as two of the seven had been left in the rear with the other boat, and these five were too much unnerved to be willing to take the hazard. It is possible that the measure of the courage of these men was in truth the measure of safety. Colonel HARNEY's solicitude for his men who were yet living led him to shout and invite them to him. Two of them, he afterward learned, heard him but were fearful that it was an Indian ruse to draw them from their hiding places. The sad party then left; one party was sent back to Tampa Bay with the painful intelligence, and the Colonel went to Camp Florida, his headquarters.

During the Florida war, HARNEY commanded several expeditions into the Everglades, in one of which he killed, or captured and hung, most of the band that had executed the massacre of the trading post.

He received the brevet of Colonel in 1840, "for gallant and meritorious conduct in several successive engagements with hostile Indians in Florida."

At the beginning of the Mexican war in 1846, HARNEY was promo-

*These men had escaped to the boat when the firing began. Two of them were wounded, and there were only two carbines in the party.— Ed.

ted to the colonelcy of the Second Dragoons. His first order from General TAYLOR sent him to the command of the forces protecting the Texas frontier and he was thus kept out of the brilliant engagements which took place during the first year of the war.

With the opening of General SCOTT's campaign of the following year an opportunity occurred for more attractive service, but between HARNEY and this commander some ancient feud appears to have existed, for the former is ordered to turn over his command to the next senior officer, and to proceed, personally, to TAYLOR's headquarters. As it was not supposed that there would be any more fighting on General TAYLOR's line, HARNEY did not propose to go, or to relinquish his regiment for an imaginary command. WORTH forwards HARNEY's respectful protest with a tribute to the latter's zeal, energy and enthusiasm, his lively anxiety for the success of General SCOTT's expedition, and his deep solicitude to serve under that officer's orders. WORTH also says, with some constraint, that HARNEY has "availed himself of several occasions to give utterance to honorable impulses and sentiments." Nothing changes SCOTT's determination to have some other chief of cavalry. HARNEY accordingly comes out with a flat-footed refusal to obey, and says: "If General SCOTT does not deem me capable of discharging my appropriate duties, he may arrest, but he shall not unresistingly degrade me." Of course a court martial must follow, but "Fuss and Feathers" must first deliver himself of the following to his subordinate. He says: "Considering your well known and long continued personal hostility to Major General SCOTT, and that it may, however erroneously, be supposed that a reciprocal feeling has been generated on his part; and considering the perfect confidence that all may entertain in the honor and impartiality of our officers generally and almost universally, you may if done promptly, select yourself, from the officers near at hand any seven, nine, eleven, or thirteen, to compose the court for your trial." This magnanimous offer was declined. Some interesting by-play occurred between the court, the accused and the commanding general, which is quite as amusing as this, and which makes us surprised at the large amount of time at the disposal of a General-in-Chief, in daily expectation of starting on a great undertaking,—and this, too, in view of the fact that the General was pleased to remit even the sentence of reprimand, imposed by the court, and to give to HARNEY his command after all.

Soon came the affair at Medelin and the capture of Vera Cruz, at which the commander was "happy to name Colonel HARNEY as one to whom particular thanks were due."

Thenceforth in the advance, HARNEY commanded the cavalry brigade. It cannot but strike us that this force was absurdly inadequate. Even the handful of mounted troops was frittered away as escorts, guards for prisoners, escorts for headquarters and all of those numerous detachments to which cavalry commands always fall an easy prey. Many of the horses had been injured and drowned in the sea voyage, so that now the cavalry force was partly dismounted from other causes than those incident to the campaign. The Mexican shows much aptness in guerilla warfare, and in such a field the cavalry found itself, hampered by detachments, weak in numbers and more than half dismounted. In view of the fortunate result of the Mexican war, criticism might now seem unjust, were it not that precedents and military maxims were there laid down for future use. The Mexican war was the school in which the early army commanders of 1861 learned their art, and in the use and employment of the cavalry we are forced to see many coincidences.

As a result we see HARNEY able to collect only a small force of four companies from his three regiments, to charge the Belen Gate, City of Mexico. May we not also conclude, that the chief of cavalry, on account of this wide separation of his troops, found more chance for distinction with an infantry command than with his own? At the battle of Cerro Cordo, at least, he led an infantry brigade in the storming of the heights of El Telegrafo.

For this action he received the brevet of Brigadier General for gallantry, and many admiring notices in the records of that day—one of these is thus quoted in "Everglade to Cañon:"

Think of his towering form carrying his brigade to the storming of that terrible height! What a picture for an artist—HARNEY, with arm outstretched and sword drawn, pointing to the height, with his gallant brigade, regardless of all obstacles, rushing into the enemy's breast-works! All accounts represent him as conspicuous, and that the clear, shrill tones of his voice, calm almost to frigidity, could be distinctly heard all the way up the mountain-side.

* * * * *

This was truly a gallant deed, worthy the Chevalier BAYARD of our army, as the intrepid HARNEY is well styled. General SCOTT, between whom and Colonel HARNEY there had existed some coolness, rode up to the Colonel after this achievement, and remarked to him: "Colonel HARNEY, I cannot now adequately express my admiration of your achievement, but at the proper time I shall take great pleasure in thanking you in proper terms." HARNEY, with the modesty of true valor, claimed the praise as due to his officers and men.

After the Mexican war the next important service was in 1855, when he was recalled from a leave of absence in Europe, to organize

the Sioux expedition of that year. The Brulé band of Sioux Indians had been giving trouble for years and now, their numerous depredations, together with the recent massacre of Lieutenant JOHN R. GRATTAN and his command near Fort Laramie, determined the government to teach them a lesson. Leaving Fort Leavenworth with six hundred men, HARNEY marched to the North Platte river and struck the Indians on Bluewater Creek. The battle that ensued has since been called Ash Hollow; it resulted in the capture of the Indian camp with many of their women and children, and the killing of seventy-eight warriors. This punishment was sufficient to quiet this particular band of Indians for a long time, although hard service for many months followed, over the broad lands now covered with the farms and villages of Kansas and Nebraska.

In 1858 Colonel HARNEY was made a full Brigadier General and ordered to Oregon, where his fame had already preceded him, among the turbulent Indians of that region. Then followed a serious dispute with the British authorities as to the ownership of the San Juan Island. Out of the history of our northwestern boundary, where our greatest statesman was overmatched in diplomacy, and where our country receded from its brave war-cry of "Fifty-four forty or fight," we may derive some comfort from an act of the military authorities. HARNEY decided to settle the dispute by taking possession of the island with an armed force of one hundred men, under the famous GEORGE PICKETT—then a captain, with orders to maintain possession by force, and they accordingly did "stand off" a British command. The peaceful policy of those days, immediately preceding the civil war, caused this action to be overruled, and a joint occupancy of the island by British and American forces was agreed to. At a later date, the German Emperor, in arbitrating this question, awarded the island to the United States, and thus vindicated the judgment of the military commander.

Such a positive nature must inevitably collide with others, where they meet in such stirring times, and in HARNEY's career the storms were many and frequent. With the merits of one of these, the whole army was at one time excited. On this occasion his rejection of a carefully worded invitation to meet another officer outside the city, and the court martial of that high officer for this breach of discipline, filled the army with the merits of a quarrel that had lasted for years. A part of the correspondence is preserved to this day in our law books, but the passions of the hour have died with the hearts that nourished them. Suffice it for the purposes of this brief notice to

say, that we can find nothing in HARNEY's character to indicate lack of combativeness or unwillingness to meet an enemy.

The great days, immediately preceding the war of the States, were now at hand. Recalled from Oregon, HARNEY was placed in command of the Department of the West with Headquarters at St. Louis. In April, in 1861, while on his way to Washington to report to the President, he was arrested by Confederates at Harper's Ferry, in Virginia, and taken to Richmond. He was treated with consideration and respect, and resisting all appeals to his Southern birth and sympathies, he was soon released.

At this time he seems not to have realized the gravity of events that were fast progressing. With an earnest desire to avert bloodshed, and with a regard for State government, which events have shown was most unwise, he recognized General STIRLING PRICE as commander of the State militia, and agreed with him to make no move so long as peace should be maintained. This brought upon him the distrust and enmity of the Federal faction; he was relieved from command and in 1863 was retired from active service. In 1865 he was made a Brevet Major General, for long and faithful service, and in 1867-8 he served on the commission to treat with the Sioux Indians.

His later years were passed in Saint Louis and in Mississippi and Florida. He died at Orlando, Florida, in May last, at the age of eighty-nine years.

General HARNEY took a great interest in the Cavalry Association, of which he was an honorary member. He was a typical dragoon of the old school, and whatever may be said of his abilities or of his judgment, he was undoubtedly able to perform many valuable services in a very active field of duty. His name will be a tradition among the Indians of our country for many years. In our service he passes from our midst as a bluff, hard swearing, rough riding trooper, a very picture in form and bearing, who cut the pattern and filled the mould for the cavalryman of his day.

WITH THE RESERVE BRIGADE.

ON THE 2d of July, 1864, the cavalry corps of the Army of the Potomac was placed in camp at Lighthouse Point on the south side of the James river, some three or four miles below City Point. The incessant marching and fighting during the months of May and June, under its new commander, General SHERIDAN, notwithstanding the results were in the highest degree brilliant and satisfactory, had told severely on both men and horses, and a short period for rest and recuperation was absolutely essential to its future efficiency.

The Reserve, or "Regular" Brigade, as it was sometimes called, was at this time composed of the First, Second, Fifth and Sixth regiments of regular cavalry, Battery D, Second United States Artillery, the Sixth Pennsylvania Cavalry, and the First New York Dragoons. The brigade was commanded by Brigadier General WESLEY MERRITT and was attached to the First Cavalry Division, commanded by Brigadier General A. T. A. TORBERT. There were two other brigades in the division, the First commanded by Brigadier General CUSTER, and the Second by Colonel DEVIN, Sixth New York Cavalry.

The Reserve Brigade, composed as it was, largely of regular troops, possessed a certain distinction which it had honorably maintained through a long period of brilliant service under able commanders since the first organization of the cavalry corps in the beginning of 1862.

At this time, the regular regiments were much depleted in numbers by the casualties of service and the difficulty experienced by the government in competing successfully with the different States in the matter of recruiting. The volunteer service had for the soldier many advantages over that of the regular army. All of the social forces of the North were organized to watch over, encourage, and support the volunteers who were fighting the nation's battles. Every town and village, every church and Sunday school, had its "Soldier's Relief Society," and through the agency of the sanitary and Christian commissions they distributed to the soldiers at the front delica-

cies for the sick and wounded, articles of personal comfort not provided by the government, and above all, words of encouragement and cheer which served to remind the soldier that he was not forgotten, and that his sacrifices were not unappreciated. In the distribution of these good things the soldier of the regular army received but a scant portion; he belonged to no State or town, and although his claim to a share in the Nation's bounty might have been recognized, there was no one to whom he could properly apply when the occasion occurred in which relief was needed.

The strength of the regular regiments of the brigade did not at this time, average more than 250 men present for duty. There were at all times a large number of men absent, at the dismounted camps awaiting remounts, sick in hospital, or in southern prisons. The number of officers was proportionately small, as in addition to the ordinary casualties of service, many were called away to hold commissions in the volunteer service, others were in demand for staff duty, for which their military education fitted them, and others were necessarily employed in mustering and disbursing duty, or inspecting and purchasing horses.

The tactical unit of organization was that of the squadron, which might contain anywhere from sixty to one hundred men, a sufficient number of companies or troops being used to bring it up to the requisite strength. The scarcity of officers made it frequently necessary to assign one officer to the command of several troops, and as separate accounts and returns were required for each one, when the small opportunity afforded for clerical work is considered, it is not surprising that the official records for this period are somewhat incomplete.

During its period of rest at Lighthouse Point, the cavalry corps received a considerable accession to its strength by the joining of remounted men, and both men and horses were rested and strengthened, so that when on the 26th of July, an order for its movement came, it was in excellent condition for service.

On the morning of the 27th, before daylight, the First and Second Cavalry Divisions, in connection with the Second Corps, crossed to the north side of the James river, at Deep Bottom, for the purpose of making such a demonstration in the direction of Richmond as might cause the withdrawal of a portion of the enemy's forces from his lines in front of Petersburg, preparatory to the springing of the great BURNSIDE mine.

After crossing the river, we moved out on the Newmarket road, where our advance soon encountered the enemy's cavalry skirmishers,

and without difficulty, drove them back upon their infantry supports. The brigade was now dismounted, and after our lines were all established, the enemy advanced with the evident intention of driving us from our position. The brigade was lying down behind the crest of a ridge, and as the enemy appeared, not more than twenty yards in our front, such a destructive fire was poured in from our breech-loading carbines, that his lines broke in confusion; when our men, rushing forward with a cheer, completed the rout, capturing some two hundred and fifty prisoners and two stands of colors. We held this position until the 28th, when we withdrew to the vicinity of the pontoon bridge by which we had crossed the river, and the same evening, the bridge being covered with hay to deaden the sound of our horses' footsteps, we recrossed to the south side. The meaning of this secrecy of movement became apparent the next morning when we were marched back again, dismounted; the intention being to convey to the enemy, from whose signal stations the movement was plainly visible, the impression that a large force of infantry was crossing to the north side of the river. The division returned during the day in parties too small to attract attention at a distance, and on the night of the 29th, marched in the direction of Petersburg to take position on the left of our lines, with a view of operating against the enemy from that flank, in the event of his defeat in the attack which was to follow the firing of the mine.

Memory brings back to us the night march of a tired and sleepy cavalry column, as one recalls the visions and fancies of a fevered and delirious dream. The monotonous movement of the long column, invites the tired faculties to rest and forgetfulness, while the ever present necessity of preserving the seat in the saddle, and controlling, to some extent, the movements of the horse, renders sleep impossible. This results in a state of semi-consciousness in which the tired rider is in some degree both sleeping and waking. He is conscious of the movement of the column, of the presence of his companions, and may even respond with seeming intelligence to the conversation addressed to him; but his brain is at the same time full of dreamy illusions and imaginings. The fences, trees, and other objects by the wayside, assume, perhaps, the semblance of long lines of buildings in the streets of a city, peopled by indistinct and ghostly forms, and he takes his part in the varied scenes and incidents of another and widely different life; until he is brought back to the realities of the present by a sudden halt amidst the pots and kettles of the pack-train which follows the regiment in his front. A few delicious moments of sleep, which is ever present and ready to take full possession, and he is aroused

again to consciousness to follow the indistinct and swiftly disappearing forms in his front. Or, perhaps, being dimly aware of a longer delay than is warranted by an ordinary obstacle, he arouses himself sufficiently to ride forward to investigate, and finds that some sleepy darky with his pack-mule blocks the way, while the column is out of sight and hearing.

Such was the character of our march on the night of July 29th; until, a few moments before sunrise, the muffled thunder of the explosion of the mine, followed by the roar of artillery, aroused everybody, and gave rise to anxious expectations as to the result. Some two or three hours later, we found ourselves directly in rear of the scene of the explosion, when it was apparent, from the groups of stragglers which dotted the plain, and the cessation of active movements, that some one had again blundered, and that the attack following the explosion of the great mine, from which such grand results had been predicted, was a failure.

On the night of the 30th, we camped at Jones' Hole, on the Welton railroad. The next morning, the division received orders to march to City Point, and before evening, it had begun its embarkation on the transports which were to carry men, horses, and trains, to the vicinity of Washington, for service against the Confederate forces in the Shenandoah Valley, under General EARLY. Change is always welcome to the soldier, and all looked forward with pleasure to a campaign in the beautiful valley of Virginia, and with confidence to a meeting with any portion of the Confederate armies, to be found in that region.

A portion of the brigade disembarked at Giesboro Point, on the Potomac near Washington, on the 3d of August, and the remainder arrived on the following day. On the evening of the 5th, the whole division having assembled, it marched through Washington *en route* for Harper's Ferry. It was a sultry evening following a hot August day, and as we reached the outskirts of the city the pumps that were here and there located in front of the dwelling houses were freely patronized by stragglers from the column. At one of these, in front of a residence in Georgetown, I recognized General HALLECK, who with goblet and pitcher, was engaged in supplying the wants of the thirsty troopers.

On the 8th, we passed through Harper's Ferry, moved out on the road to Halltown and went into camp. The cavalry serving in the Middle Military Division, (as General SHERIDAN's new command was designated) was organized into a corps under the command of General TORBERT. It consisted of the First and Third Divisions of the

cavalry of the Army of the Potomac, and AVERELL's—afterward POWELL's—division of West Virginia cavalry. A small brigade of two regiments under the command of Colonel CHARLES R. LOWELL, Second Massachusetts Cavalry, which had been operating in the vicinity of Washington, continued for a time to act independently, but its regiments were soon afterward united to the brigades of the First Division. General MERRITT succeeded to the command of the First Division, and Colonel ALFRED GIBBS, First New York Dragoons, to that of the Reserve Brigade.

On the 9th there was some sharp skirmishing on the advance picket line which presaged a closer acquaintance with the veterans of EARLY's army, and on the 10th a reconnoissance was made in the direction of Winchester, the enemy's cavalry being driven back to the protection of the infantry. On this day by an unfortunate mistake the Second Cavalry unexpectedly ran into the enemy and had two officers, including its commanding officer, seriously wounded, besides losing several men. The brigade was ordered to move out on the Berryville pike, and the Second Cavalry, through some conflict of orders, not being ready to move, was left to follow the brigade. After marching a short distance the column changed direction to the left to strike the Millwood pike, and the Second not being apprised of the change of direction, and supposing it was following the column, continued its march toward Winchester without an advance guard, and encountered the enemy with the unfortunate result above mentioned.

The 11th was a busy day. We first became engaged with the enemy's cavalry, and after driving them several miles toward Newtown, were brought to a standstill by a heavy force of infantry. The entire division was sent in dismounted. The brigade had in its front a wide ploughed field with a thick grove of timber beyond, in which the enemy was strongly posted. We went across with a cheer, in double time, drove the enemy for the moment from the timber, but soon, being exposed to a heavy flank fire from the left, were obliged to return across the ploughed ground, if more silently, at least as expeditiously, as when we advanced. Here we found that inanimate friend of the soldier, a good substantial rail fence, and soon had rail barricades in our front which we held until dark in spite of every effort of the enemy to dislodge us. We had learned from prisoners captured in the timber that we were fighting GORDON's division of infantry, and felt entirely satisfied with our day's work. It was in this affair that it is related of an officer, who being seen in the thickest of the fight behind a tree with both arms extended, when asked

what he was doing, replied, that he was reaching for a leave of absence.

On the 12th, we marched out on the Strasburg pike, as far as Cedar Creek, meeting with but slight opposition, EARLY's army having fallen back up the valley. The next day a reconnoissance was made to near Strasburg, and on the 14th, the portion of the brigade not on picket duty, remained in camp. This rest was welcome, and much needed, for the hard marching of the past ten days, in the hot August weather, had tried severely, both men and horses.

On the 16th, while the Reserve Brigade covered the line of Cedar Creek, General MERRITT, with the brigades of CUSTER and DEVIN, had a severe engagement near Cedarville, with KERSHAW's division, which had just arrived in the valley from LEE's army at Petersburg. This division was routed, and driven across the Shenandoah, with the loss of three hundred prisoners and several stands of colors.

Our cavalry was at this time generally armed with the SHARP's breech-loading carbine. It was used with a paper cartridge and percussion cap, and although incomparably inferior to the arm now in use, was yet so much superior to the muzzle-loading musket as to give us an immense advantage. In these various engagements in the valley, in which the cavalry fought dismounted, it was difficult for the enemy to believe that they were not confronted with the best veteran infantry of our armies.

About this time MOSBY's guerillas became quite annoying in their attentions. They captured and burned, near Berryville, a large number of wagons laden with supplies, among which were the regimental wagons of the Reserve Brigade. These wagons contained the regimental and company records, and the largest portion of the personal outfit of the officers, and were a severe loss. To some officers whose accounts were in a hopelessly muddled condition, it was not without compensating advantages, in that it made it utterly impossible to render the strict accounts ordinarily insisted upon. On the 15th of August, two young cavalry officers, Lieutenants WALKER, of the First, and DWYER, of the Fifth, while *en route* to Harper's Ferry on duty, were waylaid, the former being killed, and the latter wounded and captured.

The transportation provided the cavalry for field work was reduced to the lowest possible limit. The men were accustomed to rely solely upon their horses to carry all of their belongings, including their rations. When the rations gave out, as they frequently did, they went hungry or lived off the country. The officers were allowed pack-animals at the rate of one to each three officers, to carry their

bedding and mess outfit. These pack-trains were accompanied by a string of black contrabands, mounted on anything which had four legs and could get over the ground. Each one claimed to belong to some particular officer, and in camp, if not very useful in other respects, they afforded much amusement, and were the victims of many practical jokes. They were generally faithful, but were in mortal terror of falling into the hands of the "Rebs," and were careful to keep well to the rear when any fighting was in progress. As they usually carried the mess outfit with them, this practice had sometimes its inconveniences. Often, an unexpected move would separate us from the pack-trains, when they would seek refuge in the rear of the army with the wagons, only making their appearance after several days. At such times we fared as fortune, and the resources of the country, permitted.

Pursuant to the determination of General GRANT that the Shenandoah Valley should no longer be used by the Confederate armies as a granary and supply depot, orders were issued on the 16th of August for the destruction of all wheat and hay, and the seizure of all live stock, accessible in the valley. The First Division was employed in this disagreeable and demoralizing duty until the 20th. On the 21st, EARLY's army having been heavily reinforced, made a general advance, when our troops fell back to a defensible position near Charlestown. The First Division was engaged with the enemy's infantry the whole of the afternoon of this day, and maintained contact with it until the next morning. On the 22d the division marched to Shepardstown and remained there until the 25th, when, along with the Third Division it marched in the direction of Kearneysville. Near this place we unexpectedly encountered a strong force of the enemy's infantry and by a vigorous attack they were thrown into confusion and lost a large number of prisoners. The cavalry, however, soon found that it had taken too big a contract and fell back to Shepardstown,—CUSTER's brigade being obliged to cross the Potomac near that place to avoid being cut off.

On the 28th the division marched toward Leetown, the Reserve Brigade leading, with the First Cavalry in advance. As we approached Leetown a portion of the brigade was sent forward on a reconnoissance and a strong force of the enemy's cavalry was developed beyond Leetown, in the direction of Smithfield. After passing Leetown the head of the column encountered the enemy's skirmishers in considerable force, and all of the regiment in advance, except one squadron, was deployed. Soon, the sharp rattle of carbine fire indicated hot work, and in another moment our skirmishers came

back on the run, while the familiar "rebel yell" told us that the enemy was charging. Without loss of time the commanding officer of the leading regiment ordered his reserve squadron to draw saber and charge down the pike to receive the attack. This charge has been thus described: "As we entered the pike a dense cloud of dust could be seen moving rapidly toward us. Soon as the two charging bodies, moving at full speed, approached each other, the gleaming red cross of their battle flag could be distinguished. But in the same moment they slackened speed and opened fire with the pistol; when almost instantly we struck them with the momentum of our charge undiminished. We went through them with a crash—a fusillade of pistol shots—a few quick saber strokes—men and horses rolling in the dust of the pike—and the whole brave array, with the defiant yell dying on their lips, were in wild confusion and flight." The charge of this advance squadron was followed almost immediately by that of the Second Cavalry, the next regiment in the column, and was supported by the whole brigade. The Confederate troopers were driven pell mell across the Opequan creek under the protection of their infantry, and it was a long time before they again attempted a mounted charge. In this affair we captured some thirty or forty prisoners, many of them with sore heads from the strokes of our dull sabers. The First Cavalry lost a brave officer, the gallant leader of the advance squadron, Lieutenant J. S. HOYER. He was shot through the body and died within an hour. His social qualities and genial disposition made him a universal favorite, and I doubt if the long "roll of honor" of the Reserve Brigade bears the name of one who was more sincerely regretted by his comrades. The remaining casualties were confined to the leading squadron, and consisted of some ten or twelve wounded men and perhaps as many horses. This charge well illustrates the relative effectiveness of the pistol and saber as charging weapons. Had both parties used the saber, victory must have rested with the force which was best mounted, had the boldest riders, and the most skillful swordsmen. As it was the hesitancy of the Confederate cavalry, in the effort to use the pistol, was fatal to the success of the charge. A peculiar feature in cavalry operations during the war—the charge in column of fours—was exemplified in this affair. The frequency with which this formation was resorted to was due to the fact that the broken character of the country and the number of walls and fences left the roads and pikes almost the only unobstructed ground over which a charge was possible. The limit imposed by the fences on either side of the road, enabled a small, determined force, to act at a great advantage. In

this affair the strength of the force which actually encountered the enemy was insignificant, yet it routed and put to flight a full brigade.

The division went into camp near Smithfield, strongly picketing on the line of Opequan creek. It being evident that the enemy was in strong force on the other side of the stream, the troops were in the saddle at daylight on the 29th. The sun rose clear and bright but all remained as quiet and peaceful as a Sabbath morning. As the day advanced, the bands of the several brigades were assembled on a knoll overlooking the creek and a broad expanse of beautiful country beyond. The general officers with their several staffs were also collected here, and a number of officers from the different regiments which had dismounted in the vicinity had also strolled up to enjoy the music and to gather any bits of news from their better informed friends of the staff. A brigade had been ordered across the creek to develop any force of the enemy which might remain in our front, and its movements, with skirmishers deployed, were being observed through field glasses, when a horseman on a gray charger was seen to emerge from a skit of timber about a mile distant. He quickly disappeared, when Bang! Bang! Crash! came the reports from the guns of a rebel battery, and the almost simultaneous explosion of several shells on and about the little hill where the gay throngs had assembled. The rapidity with which the scene changed was marvelous. All had business which called them elsewhere, and the hill was deserted in a twinkling. In a few moments the gray columns of the enemy's infantry preceded by a cloud of skirmishers could be seen emerging from the timber. Our forces soon became engaged. The brigade which had crossed the creek was driven back. The whole division was dismounted and sent promptly to dispute the crossing of the creek, but its efforts were unavailing; we were steadily driven back by the superior force of the enemy. Our retreat placed the little town of Smithfield in the thickest of the fight. A caisson exploded in the streets of the town, and the terrified inhabitants sought shelter in the cellars of their houses. As a general officer paused a moment in the little village, a frightened woman rushed out imploring with outstretched arms and disheveled hair: "For God's sake, General, can't you move the battle a little further off?" The General assured her he was doing his best to accomplish that object. The cavalry was forced back a mile or so beyond the town where a line of barricades having been established, the advance of the enemy was checked, and a division of the Sixth Corps having been sent to our assistance, he was again driven across the Opequan.

In the first part of September the division made a demonstration in the direction of White Posts. About the 5th of September it took

up a position along the Opequan between the Berryville and Smithfield pikes, which position it retained until the battle of Winchester.

During this time it is not to be presumed that we were idle. Picket duty was severe and onerous and frequent reconnoissances not only afforded us occupation but caused our list of casualties to steadily increase. General SHERIDAN in his report says: "Although the main force remained without change of position from September 3d to 19th, still the cavalry was employed every day in harassing the enemy. Its opponents being principally infantry in these skirmishes, the cavalry was becoming educated to attack infantry lines." I think it was the general impression in the cavalry that its education in this respect had been previously completed. The experience and self-confidence which it had acquired during the expeditions and campaigns of the two previous years, now enabled it to oppose with confidence EARLY's veteran infantry, and by thus placing itself as an impenetrable screen in the front of our army secured to its General-in-Chief that freedom of movement which was a potent factor in the success which followed. Our infantry were also enabled to rest quietly in their camps so that when the hour for action came they were prepared for quick and vigorous movement.

About this time the First New York Dragoons was transferred from the brigade, and its place was filled by the Second Massachusetts Cavalry, Colonel CHARLES R. LOWELL of this regiment succeeding to the command of the brigade. Colonel LOWELL, although a regular officer had not previously served with the brigade and was comparatively unknown to both officers and men; but from the first, by his soldierly qualities, he commanded the confidence of all, and the luster of such glory as had been won for the Reserve Brigade by its former brave commanders, acquired new brightness under his able and fearless leadership.

On the morning of the 19th of September, the Reserve Brigade was in the saddle long before daylight en route for Seever's Ford on the Opequan. As we approached the ford, the enemy's cavalry pickets, after firing a few shots, retired hastily across the creek. As daylight rendered objects visible, a force of the enemy could be seen on the opposite bank, strongly posted in the timber beyond the steep banks of the creek. The brigade having been ordered to carry the ford, advanced and charged across without hesitation, the Second Cavalry in the advance, and in spite of the very heavy and effective fire opened upon it, maintained its position. It was soon dismounted, and a connection having been made with CUSTER's brigade on the left, which had crossed at another ford, by a vigorous attack the enemy was dislodged from the timber, and soon after sunrise, a general advance

having been ordered, fell back in the direction of Winchester. The force in our front was WHARTON's Division of infantry; and it appears from the report of General MERRITT, that in this early part of the day it was his object to keep this division so engaged as to prevent it from marching to join the rest of EARLY's forces near Winchester.

As the forenoon advanced, the long continuous roll of musketry and the steady roar of artillery, made it evident that a general action was in progress, and from the knowledge we had gained as to the character of General SHERIDAN, we felt confident that the cavalry would be permitted to take its share of the work and any distinction or glory incidental thereto. During the forenoon we ran up against the division in our front, strongly posted behind a barricade of rails, and after the First Brigade had unsuccessfully endeavored to dislodge the enemy by a charge, mounted, we settled down to dismounted skirmishing for an hour or two, the division commander evidently satisfied to detain as long as possible this effective force from the battle which was now raging to its right and rear. But it finally becoming apparent that they were slipping away from us, a general advance was ordered. At about three P. M., the division was united on the Winchester and Martinsburg pike, DEVIN's brigade in advance. The enemy's cavalry now making its appearance in an endeavor to cover the left flank of EARLY's army, they were brilliantly charged by DEVIN's brigade, and for the time disposed of. The division was now formed in line, the Reserve Brigade on the left connecting with the infantry line of battle, and in this order advanced to the open fields near Winchester. The enemy's cavalry having again rallied, was charged by the First and Second Brigades and effectually disposed of for the day.

We had now approached within range of the enemy's artillery and the brigade was massed in close column of squadrons and awaited developments. The most trying test of soldierly qualities is the waiting under fire the opportunity for action. In the absence of occupation the full horror of every casualty is impressed upon the mind, until the permission to ride in the headlong charge, "into the jaws of death," comes as a relief.

On this occasion, as our movement was delayed, the rebel gunners increased the accuracy of their fire until it seemed impossible for us to retain our position without getting into disorder. The Second Brigade was given its opportunity first. A movement of the enemy's infantry invited the attack, and the brigade led by the gallant DEVIN, went in with a cheer in magnificent style. They were upon them in a moment—a confused mass of the blue and the gray, with

the gleaming sabers over all, and the gallant brigade emerged with its trophies—a crowd of prisoners and three stands of colors.

And now at last the Reserve Brigade is to move. Draw saber! Trot! Gallop! Charge! were commands in quick succession. The ground before us was open and unobstructed and all that could be desired for a cavalry charge. A battery of two guns in an earthwork on the enemy's left was passed, and the brigade became the target upon which the converging fire of a long line of infantry was directed. But, Forward! Forward! was still the cry. A short distance from the enemy's line the ditch of an old earthwork caused some confusion, but almost instantly the shaken squadrons had reached and crossed the slight entrenchment behind which the hostile lines were posted. They were overwhelmed, thrown into disorder, routed. Saber strokes fell fast and thick, but our work was done. The charge had spent its force, and the solid, unbroken lines of the enemy's reserves compelled a withdrawal of the brigade to reform its shattered ranks. The charge of the Reserve Brigade was followed by that of the First, and a general advance of our lines completed the rout of EARLY's army.

The shades of evening were falling as the cavalry marched through Winchester, and while the satisfaction of a day's work well done pervaded all hearts, the coming night seemed to bring with it something of the gloom which must have filled the breasts of the defeated and their disloyal friends in the old historic town.

The battle of Winchester, although not one of the *great* battles of the war, was in some respects a remarkable one. On the 18th of September, General SHERIDAN received information that EARLY had sent two of his divisions to Martinsburg, and it was this information which determined the movement, the General hoping to be able to defeat the Rebel army in detail. But it turned out that these two detached divisions had rejoined the main force, and early on the morning of the 19th, General SHERIDAN was apprised that he would have to engage the whole of EARLY's army. This necessitated a change of plan at the last moment, and to a general less ready of resource might have proved fatal to success. This victory was in a great measure due to the superiority of our cavalry, and to its proper use on the field of battle in tactical combination with the other two arms of the service. Examples of this character are, unfortunately, rare in the history of the war, and a careful study of this battle by the military student will be found profitable.

MOSES HARRIS,
Captain, First Cavalry.

MARCHING CAVALRY.

UNDER this heading, something will be said on the subject of the conduct of the smaller bodies of mounted troops, in such service as they are now called upon to perform. It is not the intention to discuss the manner of moving large columns of cavalry in a civilized war, or upon occasions of ceremony. It may be remarked, however, from past experience, that in time of war, cavalry battalions, regiments, brigades, corps and divisions are hurled through the country without much exactness as to tactical formations, gaits or camps; and that our tactics are good enough for occasions of ceremony, if properly studied and understood.

The marching of cavalry is so much affected by the immediately surrounding circumstances that no set rules can properly govern the length of marches and the manner of making them.

The conduct of a regiment changing station, with its supplies furnished, either at designated points or by accompanying trains, is so unlike the march of a column scouting after hostile Indians that a rule, correct in one case, would not apply in the other. In the former case, a steady walk, with the usual halts and increased distances, would, perhaps, be the best manner of marching. Such a day's march would be twenty or twenty-five miles, and would be no test of the endurance of men or horses, as both should improve under such conditions.

The proper manner of marching cavalry, while "scouting" or on a trail in pursuit of hostile Indians, is difficult to describe. If a commanding officer marches his column a long distance rapidly, over a mountainous country, a percentage of his horses will undoubtedly become exhausted. If he does *not* march rapidly he cannot expect to overtake an enemy who does not consider the suffering or loss of animals. It is probable too, that when it has become too dark to travel, the point reached is without water or grass, or with but little of either. Hence it appears that no rule will apply to all cases.

It is well, though, to have certain general rules; for instance, in

mountain districts, when it can be judged about what the line of march will be. If the journey is to be long, and speed is necessary, discard all the pack possible, place the man's blanket over the saddle blanket, leave saber, side-lines and nose-bags behind; in summer take no overcoats; take a piece of shelter-tent, a change of clothing, a meat-ration can, canteen and tin cup, lariat and picket-pin, extra horse-shoes, front and hind, with sufficient nails to put them on,—all this will make a pack heavy enough in all conscience for a cavalry horse in a mountain district. It must be remembered that the march will probably be made without forage, unless the trail may happen to run near a post or settlements, and this alone is sufficient reason for making the weight to be carried by the horse as light as possible.

If the speed necessary to accomplish the object, requires an increased gait, no specific time for the continuance of such gait can be designated, as the roughness and smoothness of the country must govern.

The long and rapid march should begin at a steady walk; after the first five miles, dismount, look to saddles and straighten out for the day's work. There must be no slouching in the saddle; take advantage of all good ground and increase the gait there, whether it be for a half mile or for six miles; save the horses at all steep ascents and descents. Having reached the top of a particularly steep mountain, it is well, before mounting, to breathe the horses for two or three minutes; but there is generally no necessity for halting, except to remount, as the horses are not apt to become winded if led up the steep hills. Station a non-commissioned officer at the place of mounting after a descent, to make each trooper remount and close up on arriving at that point.

Keep up the march; make lengthy halts only for water and always water as often as possible, keeping in mind that some horses will drink freely every two hours or so, when traveling fast, if they have the opportunity. The idea that no horse should be watered if all cannot, does not work well in practice, as it is better to have some horses rather than none, capable of a great effort and there are some horses too which require more water than others.

To refer again to the increased gait,—in case a saddle should slip, let the trooper fall out with a non-commissioned officer, adjust the saddle and rejoin. After the second cinching but little trouble will occur in this respect, until the horses become thin from travel.

In a march of eighty-five miles, accomplished in twenty-two hours, over the plains of Texas, from a point on the Pecos to Bull Spring,

Guadalupe mountains, in 1881, only one non-commissioned officer and four men out of a troop of about fifty-five men, fell out for a rest. They were temporarily exhausted, but reached the camp about eight hours after the arrival of the troop, and this delay was altogether on account of the men, not of the horses.

On this march, over a level country, a method of marching, different from that employed in mountain districts, was adopted. After the first forty miles were made at an alternate walk and slow trot, (the men being dismounted occasionally and marched afoot rapidly for about five minutes at a time), a halt was made for about ten minutes in each two hours, men slipping bits and looking to saddles at each halt. The march was then resumed at a fast walk and trot, alternating as it was felt the horses required. It is undoubtedly the case that an experienced cavalry officer can *feel* when it is best to hold up his horse and when he can safely move out at a faster gait. A watchful observance of the column will enable him to judge pretty correctly what his troop horses can do.

It will be noticed that the side-lines are among the articles left behind. It seems to me that they are useless in mountain districts and generally in night herding. The horses and pack-mules should be herded at night if practicable; they should always be placed on grass quickly after camping. Let the first sergeant have his detail for herd-guard made out so as to be able to designate the men for that duty immediately on going into line for camp, before the men are dismounted. Dismount, unsaddle, lead to water, and turn out the herd. After this the commanding officer can look over the ground more carefully, if he does not know it already, and make his dispositions in camp so as to secure it against attack.

It is, perhaps, hard on the enlisted men to herd at night; but the animals must have all the grass they can get if they are to do any hard marching.

The long march, where speed is no object, should be regulated according to the grass and water *en route*. That is, if it is necessary to march a long distance to secure water and grass, it is better to do so and to lie over part of a day or longer, if necessary, than to make a dry camp.

If a march has been accomplished by noon or early in the afternoon and the herd has been grazed until sunset, it is well to place the animals on lariat at night, if good grass can be found in the immediate vicinity of the camp. This grass should not be encroached upon during the day, but held in reserve for use during the night.

In the immediate vicinity of an active enemy, when it is almost

a certainty that he will get a part, if not all of the animals if they are loose at any distance from the camp, the lariat should be used as a means of safety and there are various ways in which to use it.

The following plan secures the horses, but prevents much rest to the men. Four pins are driven in the ground near together, the men to whom the horses belong lying between the ropes, using their saddles, which rest on the picket pins, as pillows.

There was a plan adopted by several officers, in the campaign of 1874, against the Comanches, which prevented any loss of horses by stampeding, but it was not conducive to their good condition. The lariat was carried down from the halter-ring through the near front hobble of the side-line, thence along the ground to the picket-pin; but this treatment of the horse was used only under circumstances of exceptional danger and in an open country. Where it is necessary to "bunch" the horses closely, (say where there is a small plat of grass,) or to shelter them in a nook surrounded by trees, the half lariat will be found necessary. When a larger force than a troop encamps, it is best to have each troop herded separately, with its own guard, so that, in the event of a stampede caused by fright or attack, all will not be affected. It would be very extraordinary if an attacking party, or several parties, could succeed in driving off four or five separate herds at one time, or that herds well separated should be all stampeded at once by fear.

If a dry camp must be made and the animals have already been without water a considerable time, night herding would be useless, (as thirsty animals will not eat) and dangerous, as they would certainly attempt to stray away in search of water, and some usually succeed in escaping in spite of the efforts of the guard; hence they should be lariatied. It may occur that during the day, too early to camp, good water and grass are found; in that case a two hours' halt to water and graze, is advantageous.

In fact, good judgment must always be used by the commanding officer of a scouting column in the various situations in which he finds himself, in the rough, wild Indian districts of our frontier.

WILLIAM H. BECK,
Captain, Tenth Cavalry.

POST INSTRUCTION.

THE inclemency of the weather and the absence of riding halls or gymnasiums at nearly all of our posts, necessitates a cessation of military exercises during a part of the year. At all such posts, and at others where for any reason there is a period of inactivity, the following suggestions in regard to the preliminary training of men and horses are offered.

For at least two months preceding the opening of the drill season, the non-commissioned officers in each troop should be instructed in the subjects of tactics, regulations, reconnoitering and out-post duties, temporary field fortifications, rough field-sketching and the preparation of such reports as non-commissioned officers in charge of reconnoitering patrols would have to make in time of war. In the subjects of tactics and regulations this can be readily accomplished by the usual non-commissioned officers' schools. In the other subjects instruction could be given by lectures, assembling all the non-commissioned officers at a post once or twice a week for the purpose, and taking them into the field in good weather, for practical illustration of the subjects of the previous lectures.

During the period of theoretical instruction of non-commissioned officers, the men could be practiced in the manuals of the saber, pistol and carbine and also put through the "setting up" exercises. These drills could take place either in the barracks, on the porches or in the cavalry stables, if the circumstances prevented their taking place on the parade ground.

These drills need not be of long duration, say twenty minutes "setting-up" exercises in the morning after guard-mount, then after a short intermission, thirty minutes' saber exercise, and in the afternoon one hour devoted to drill with carbine and pistol, at least one-half of the time being devoted to practicing the exercises for "Position and Aiming Drills." Gallery practice could also be carried on during the latter portion of this period, using the time between the morning and afternoon drills.

During this same period twenty minutes at morning and after-

noon stables can also be advantageously employed in putting the horses through the bending and suppling lessons, the time allotted for stables being increased for this purpose. These bending lessons can be given to the horses just as well on the picket-line and in the stable-yards as on the riding track, and it is reasonable to believe that forty minutes per day, for two months preceding the opening of the drill season, properly devoted to these supplings, especially of the head and neck, would eliminate the fighting and struggling between man and horse, so often seen in cavalry troops, at the fast gaits. The practice of these exercises has the effect of not only making the horses light mouthed and easily managed, but it also has the same effect on them as the practice of the setting-up exercises has on the men, giving them a supple and graceful carriage and enabling them to handle themselves well at rapid gaits. The proper placing of the head and neck, brought about by the bending lessons, necessitates the horse bringing his hind legs well under, thereby not only making him collected and handy at all gaits, but relieving the shoulders and forelegs to a large extent of the excessive weight; it increases his durability and prevents his being "stove up" in the fore-quarters.

At the end of these two months' preliminary training, target practice will usually begin. If the position and aiming drill and gallery practice before mentioned have been carried on simultaneously with the other drills, the troops will be in good condition to begin shooting. During the first month of target practice fifteen minutes' drill each day before Retreat, in the manuals of one or the other of our arms, will keep the men up in what they have already learned. The bending lessons for the horses could still be continued at morning and afternoon stables.

If each troop has two targets, one of which is a little to one side and 100 yards in rear of the other, the men can fire at 200 and 300, and at 500 and 600 yards from the same firing point, and each day's practice at known distance can be finished in from two to three hours. This will only necessitate target practice in the forenoon, so that in the afternoon a drill in the school of the soldier mounted, for an hour or an hour and a half may be had.

For this drill the horses should be equipped with the watering bridle, blanket and surcingle, and the men armed with the saber and pistol. The first twenty-five minutes of the drill should be devoted to the bending lessons mounted, turning, circling at the walk and trot, and passaging. Devote the next fifteen minutes to the saber exercise at a trot. Then give fifteen minutes to careful instruction in jumping, at slow gaits and with small jumps at first. Particular

attention should be paid to see that all the horses trot evenly and collectedly; if any horse shows an inclination to break into a gallop, he should be fallen out, and his rider made to trot him apart from the other horses until he will trot quietly, and then only should he be returned to the ranks. The next ten minutes should be devoted to the mounted pistol exercise, at a trot, executing the motions of firing at the head posts, first with the empty chambers, and after about two weeks, occasionally using blank cartridges. It is better in the first use of blank cartridges to bring the horses down to a walk until they become accustomed to the firing.

The remainder of the time allotted to the drill should be devoted to individual riding at the head-posts, using alternately the saber and pistol. During the first month of the drill never allow a faster gait than a trot. In fact no drill should be faster than a trot until all the horses trot evenly and quietly, both individually and in the ranks. If bending lessons have progressed systematically and the trot prescribed at all times, whether "on pass" or on duty, it is believed that in three months' time all the horses will trot quietly and evenly.

In teaching horses to take the trot from the walk, let it be done by a pressure of both knees and if necessary *both* spurs; to take the gallop, either from the walk or trot, press both knees and *one* spur, using the spur on the side from which you desire the horse to lead. It may be difficult to teach all horses this, but it can be done by practice.

This first month of drill will prepare both men and horses for the pistol practice, which takes place during the succeeding month.

During the last month of target practice, it may be difficult, owing to the limited number of skirmish targets usually at a post, for the skirmish and volley firing to be so conducted as to allow time, each day, for a mounted drill; but with care sufficient time for drill may ordinarily be had, to keep both men and horses up to what they have already learned, and, in addition, to practice the horses in galloping. At the mounted pistol practices during the month, particular care should be exercised to prevent the horses getting "out of hand" or unmanageable.

After the target practice season is over it is fair to presume that men and horses will be sufficiently instructed and hardened to inaugurate the following series of drills, if the foregoing system has been thoroughly carried out:

FIRST MONTH AFTER TARGET PRACTICE.

<i>Hours.</i>	<i>Days of We. k.</i>	<i>Kind of Drill.</i>	<i>Arms and Equipment.</i>	<i>REMARKS.</i>
9:30 A. M. TO 10:15 A. M.	Mondays. Tuesdays. Wednesdays. Thursdays. Fridays.	School of Trooper, Dismounted.	Without Arms.	The troops are divided into squads of from four to twelve men, each commanded by non-commissioned officers. The first fifteen minutes are devoted to the "setting up" exercises, the next fifteen minutes to the facings, steps, etc.; the next five minutes to marching in line, wheeling, dressing, etc.; the last ten minutes to marching in double time.
10:30 A. M. TO 11:15 A. M.	Mondays. Tuesdays. Wednesdays. Thursdays. Fridays.	School of the Troop, Dismounted.	Carbines.	The first five minutes are devoted to manual of carbine; then execute, if possible, all the movements in the School of the Troop, Dismounted, devoting any remaining time to Dismounted Skirmish Drill. Let this drill be varied, once a week, with one or two company skirmish runs, using dummy cartridges, or, if ammunition permits, using ball cartridges.
1:00 P. M. TO 2:30 P. M.	Mondays. Tuesdays. Wednesdays. Thursdays. Fridays.	School of Trooper, Mounted.	Sabers, Pistols, Watering-bridles Blankets and Surcingle.	The drill is on a riding track. The first twenty minutes are devoted to bending lessons, mounted, circling at all gaits and passing; the next ten minutes to saber exercise at a trot; next five minutes to pistol exercise at a gallop, the men going through the motions of firing at the head-posts in the different directions; next forty minutes to running at head and ring-posts; the last fifteen minutes to jumping hurdles and ditches, which should be near the track. Let this drill be varied during the last two weeks by occasional rides across the country, jumping fences and ditches, the officers leading, the men in single file with their horses well in hand.
3:00 P. M. TO 4:00 P. M.	Mondays. Tuesdays. Wednesdays. Thursdays. Fridays.	School of the Troop, Mounted.	Carbines, Sabers, Pistols, Curb-bridles, and Packed Saddles.	If possible, execute every movement in the School of the Troop, Mounted; the first thirty minutes of the drill at a walk; the last thirty minutes at the trot or gallop; ending with a charge in line. Vary this drill once a week with skirmishing and dismounting to fight on foot.

Before beginning drills it is best to divide each troop permanently into two platoons and thereafter to regulate details, so as to take as nearly as possible the same number of men from each platoon daily. The object in dividing the troop into platoons is to give to each lieutenant something he can feel an individual pride in, and responsibility for, as well as to create a wholesome emulation between the platoons themselves in regard to drill and soldierly bearing. If a lieutenant should be absent, assign the command of the platoon to the senior non-commissioned officer present with it. Each lieutenant under the supervision of the captain should be held responsible for the elementary instruction of his platoon.

Whenever starting a system of drill the instructor should explain each movement twice before requiring the men to execute it, at first using as nearly as possible the words of the drill books, and afterwards giving emphasis to particular points requiring special attention. The men should be required to repeat a movement until it is properly executed. If the same men make mistakes or if they slight portions of the movement after this, they should be punished. In going through the tactics for the first time, in a regular course of instruction, a new movement should never be undertaken until the preceding ones are executed understandingly and correctly. After going through any particular part of the tactics in this way, executing a few new movements each day and reviewing those executed on previous days, giving special explanations to men who were absent when the movements were first executed, it will be found that the men will drill much better than if a hap-hazard method were used. It will also facilitate matters very much if the non-commissioned officers are assembled in the orderly-room in the evening and thoroughly instructed in all the movements of the next day. By this method, the School of the Troop, mounted and dismounted, can be entirely finished in ten days. After this no time should be given to explanations, and if any men make mistakes they should be punished.

In instructing the men in charging it is best to use a skeleton enemy, placing the men at a distance of 1200 to 1500 yards if possible. Half of the distance is traversed at a trot, then gallop to the charging point which is about 100 yards from the enemy. Special care should be exercised, to see that the men keep their horses well in hand and keep closed toward the guide, which should always be center. After crossing the enemy's line, the trot should be taken, the men "break ranks" at command, and ride in all directions to represent the *mêlée*, which takes place when two hostile lines cross each other. In a short time the troop commander should ride out from

the *mêlée* and have his trumpeter sound the "assembly," when the men will be taught to rally rapidly on the troop commander. The rapid rallying on the troop commander cannot be too often practiced and should be done in all directions. To facilitate this the commander should direct the guidon-bearer to keep close to him, and in rallying, the men should fall in with their own platoons, but without regard to numbers or sets of four, on each side of the guidon.

It will be a good plan, if in all movements in line previous to the charge, the troop commander gives "guide center" and placing himself four yards in front of the guidon-bearer directs the latter to take the distance and direction from him. The troop commander can then ride straight on the object to be charged and also regulate the pace.

Above all things disabuse the minds of the men of the idea that a charge means a horse-race.

In deploying mounted skirmishers the pistol should be used, and in deploying dismounted skirmishers, the carbine; in the latter case men should be sent to represent the enemy, and the skirmishers made to estimate the varying distances as they advance or retreat, and adjust their sights accordingly, so that it may become second nature to them.

Riding tracks can usually be easily constructed, in default of riding halls. Head and ring-posts with leather or canvas-covered heads can easily be made. A ditch, three feet wide at one end and gradually widened to about ten or twelve feet at the other, revetted on each side with poles or fascines, can be dug in the neighborhood of the track in a few hours. Brush or pole hurdles can also be constructed at the same time.

The first essential to the proper training of either a cavalry soldier or his horse, is constant drill in the school of the soldier mounted.

After the horses are well instructed and in hard condition, and the men capable of keeping them well in hand, an occasional ride across country, the officers leading, will be a good variation of the riding-track drill.

At each military post a track of 1000 yards should be measured and the officers and non-commissioned officers made to practice riding it at the walk, trot and gallop, until the established paces can be habitually taken and maintained. After this, the fluctuations in advancing lines of cavalry will soon disappear.

If the foregoing drills have been pursued for about a month, the following system can be inaugurated and kept up until the troops are ordered to concentrate for fall maneuvers, or until the weather becomes inclement again:

<i>Hours.</i>	<i>Days of Week.</i>	<i>Kind of Drill.</i>	<i>Arms and Equipment.</i>	<i>REMARKS.</i>
9:30 A. M. TO 11:00 A. M.	Mondays and Wednesdays.	School of the Trooper, Mounted.	Saber, Pistol, Watering-bridle, Blanket and Surcingle.	Same as before.
9:30 A. M. TO 11:00 A. M.	Tuesdays and Thursdays.	School of the Troop, Mounted.	Carbine, Saber, Pistol, Curb-bridle, and Packed Saddles.	Same as before.
1:00 P. M. TO 3:00 P. M.	Mondays, Tuesdays, Wednesdays and Thursdays.	School of the Battalion, (Squadron) Mounted.	Carbine, Saber, Pistol, Curb-bridles, Saddles, with full packs.	The drills are conducted so that every movement in the School of the Battalion Mounted will be executed at least once a week, particular attention being given to such movements as long advances in line at the trot and gallop, advances in line of platoon columns, and line of double columns, all these advances ending with the charge in line. After the charge, ranks are broken and troops rallied, as recommended in troop drill. Also, after the charge, one or both flank troops may be ordered to charge as foragers, the others following in compact order at a trot.
10:00 A. M. TO 3:00 P. M.	Fridays.	Practical Field Exercises.	Same as Above.	The command is employed as Advance Guards, Rear Guards, Out-Posts, etc., and has practical instruction in scouting and reconnoitering, attacking and defending defiles, etc.

It would be well if each officer be required to attend one of these drills and if every lieutenant, in addition to drilling his platoon, be required to take command of the troop at least one day in each week at troop and battalion drill; that any officer, habitually making mistakes at drill or showing ignorance of the minor operations of war, be put in arrest and court-martialed or sent before a retiring board.

Whenever saddles are used at drill the regulation pack should be on them. It not only gives the men practice in packing their sad-

dles but it teaches them how to do it properly and securely, as well as expeditiously. If a pack is not properly put on, drill at rapid gaits will soon shake it loose and articles of equipment will fall off. It is better to have this occur on the drill ground where the articles can be found than in active service in the field. The improvement which a few months' daily practice will make in the simple matter of packing saddles is astonishing. In one troop, that we know of, nearly every man lost some article of equipment at its first drills, but a few months afterward it could drill for two hours at rapid gaits and execute several charges in line, without a single article working loose or a saddle getting out of place.

If such a system of instruction as the foregoing were carried out at each cavalry post, officers, men and horses would be in good condition to undertake fall maneuvers, and work in grand and minor tactics could be at once commenced without the necessity of first getting the command in shape by troop and battalion drills.

Some will probably contend that such a system of drill cannot be carried out, on account of the necessary fatigue, etc., but as troops are now rarely employed in building new posts, and if post commanders would only regard fatigue work as a necessary evil and not as the end and aim of a soldier's existence, some measures could be adopted which would obviate any interference between such a system of drills and the ordinary work about a garrison. At least it has been done at one post where the writer served. The old guard can get through all the ordinary fatigue work by noon and the men be available for drill in the afternoon. On Saturday mornings all the command, if necessary, can be turned out for general fatigue and general police of the post, and attend to anything left undone by the old guard during the week.

Some may think that so much drill would create great dissatisfaction and apathy among the men and cause desertions, etc. It is also thought by some, that one of the main causes of desertion is that the men have too much unnecessary labor and too little strictly military work, and that when off fatigue they are compelled to loaf around the barracks with nothing to stimulate their mental faculties or exercise their bodies.

Even counting two and one-half hours per day for stables and thirty minutes for parade, there will be no time during the proposed period of instruction when the men will be actively employed over eight hours per day, and as the Government expects and exacts that amount of labor from its other employes, it does not seem unjust to

demand it of soldiers. It is only about two-thirds of the amount of work they would have to do if employed in civil life.

Troop commanders sometimes say: "It is useless for me to work and drill my troop and get most of my men well instructed and then have a few extra and daily duty men spoil the appearance of everything when the Inspector comes around." This is all very true if he drills his troop *entirely* for show and the benefit of the Inspector, but not if he drills it with the idea of making it as efficient as possible, and besides it is certainly better to have some men well instructed than none at all. Troop commanders can generally get their extra and daily duty men at least two days per week, and if they give these men special attention on those days and have them instructed theoretically in barracks by the non-commissioned officers of their squads, these men can be kept fairly proficient, especially if the best instructed and most soldierly men in a troop are detailed for these positions in the first place. Of course troop commanders can be hampered by post commanders and quartermasters until it is almost impossible to do anything with their extra and daily duty men, but this is usually the exception and not the rule, and it certainly is no excuse for neglecting the other men.

To those officers who regard it as a matter of principle to do nothing more than they are made to do, and who regard themselves as under no obligations whatever to do any work for the salary they draw, the foregoing outline of work will appear enormous, unnecessary and prejudicial to good order and military discipline. To the remaining class, and it is believed they constitute the great majority of cavalry officers, who regard themselves as obligated to do everything in their power for the good of the Government they serve, and who are ambitious to make and to keep our cavalry the best in the world, the foregoing will appear as nothing more than should be done, provided it is possible to accomplish it. They may differ as to the details and methods of making our cavalry the best, but none will disagree with the statement that unremitting labor and thought are necessary.

WM. H. SMITH,
Second Lieutenant, Tenth Cavalry.

REFLECTIONS ON THE PRESENT CONDITION OF THE RUSSIAN CAVALRY.

THE original of the following paper appeared in the *Voïenneni Sbornik*, with the signature of General A. ARTSICHEVSKI. The translation is taken from the French version which appeared in the *Bulletin de la Réunion des Officiers*. The writer begins by controverting the radical opinion that cavalry is to disappear from the field of battle in future wars. It must conform to the altered conditions of the art of war, and it must be in the hands of leaders who know their trade. To discuss the former, we consider this subject under three heads: (1) What are the conditions to be fulfilled in order that cavalry may successfully play its part? (2) To what extent does the Russian cavalry fulfill them? (3) What measures are required to make that cavalry equal to its task?

The modern rôle of cavalry is double. It may manifest itself *strategically* under the form of independent actions, partisan warfare, etc., or, *tactically*, it may include all the moves which take place in the actual combat. This double mission will have a beneficial outcome: (1) If by a perfect organization it can act, not only in coöperation with the other arms upon the field of battle, but also independently; (2) If it can execute rapid and prolonged marches, without losing the ability to push an impetuous charge.

These desiderata are fulfilled, so far as armament goes, by the recent transformation of hussars and lancers into dragoons, whereby cavalry becomes independent. In other ways they are not fulfilled, and the writer examines the subjects of train and artillery in a manner that is interesting. He says:

"The experience of the Turco-Russian war, like that of preceding wars, demonstrates, with sufficient clearness, that the rolling material of cavalry must be abandoned in rapid marches across country. Such inconvenience was experienced by our cavalry in the late war, when it happened to go some 100 or 200 miles away from the army; but it would have shown itself in a still more evident way if the cavalry had to make raids to a great distance, for, the organization of

the train no longer corresponding to the necessities of the moment, it would have been compelled to do without its baggage, caissons, ammunition, ambulance material, in a word without all that is indispensable to the life and mobility of any body of troops whatever. In order to avoid these inconveniences, we can and should transform the cavalry wagon transportation into transportation by pack-animals, a matter which in our day cannot offer any difficulty, on account of the perfection of the pack-saddle.

"The second weak point of our cavalry consists in the absence of mountain material in the composition of the horse-batteries attached to the cavalry divisions. The exigencies of modern war demand almost imperatively, the addition of mountain guns to the cavalry, for the reason that the true rôle of cavalry, besides out-post duty and reconnaissance, consists more especially in partisan operations, that is to say, in raids against the adversary's rear, or against his lines of communications; it acts principally in those movements, which, by their suddenness, their rapidity and their daring, disconcert the enemy, leave him no rest day or night and upset his strategical combinations. This end can be attained by the cavalry only under the following circumstances: (1) When it can make a serious attack, not only against cavalry, but also against infantry covered by obstacles, which is almost impossible without artillery; (2) When, having secured its object at one point, it can immediately move upon and attack another without worrying about the state of the roads,—a maneuver which is possible only with mountain artillery served by mounted cannoneers.

"In order the better to illustrate the importance and necessity of this kind of artillery in battle, I will cite the following:

"On the night of the 22d or 23d of December, 1880, Adjutant-General SKOBELEFF, desiring to push his approaches from the first parallel towards the south side of Geok-Tépé, ordered a detachment, consisting of two squadrons with three sotnias of Cossacks and two mountain guns, to attack the north side of the Aoûl, in order by that feint to divert the attention of the Tékés. This detachment was put in march on a dark winter night, without roads, and had to cross several canals and ravines with steep banks, absolutely impracticable for field artillery. At break of day the detachment reached several entrenched *kals* (pisé towers) and gardens enclosed by clay walls, behind which 2000 Tékés had taken position. Notwithstanding their numerical inferiority, the dragoons and Cossacks dismounted and attacked the enemy, who made a vigorous resistance until the two pieces, having been unloaded and placed in battery, opened fire against the *kals* and the walls of the gardens. At the appearance of the guns, the defenders precipitately evacuated the position, making it possible for our detachment to accomplish its purpose.

"I find in the same year another example of the employment, and of the importance, of mountain artillery served by mounted cannoneers in the passage, by General SKOBELEFF, of the chain of the Kopet-Dagh, over ground absolutely impracticable for field artillery. This operation was of great importance, not only because it permit-

ted us to make numberless incursions, but also because its suddenness prepared the way for the ultimate success of our arms in the oasis of the Akhal-Téké. The only transportation for the entire expedition consisted of pack-animals. As soon as the detachment reached the crest, it opened fire on the adversary whose resistance was not very serious, merely because the mountain artillery dislodged him from all cover behind which he attempted to conceal himself.

"It appears to me almost superfluous to add that the introduction of mountain guns into the composition of horse-batteries does not necessitate the suppression of horse-artillery of higher caliber, since the latter is indispensable to fulfill other requirements of modern war.

"Passing to the second condition which it is necessary to impose on the cavalry, our attention is called to matters of mobility and the rational training of the horses.

"The satisfaction of this condition is directly subordinated: 1st. To the condition of the horses, that is, to their kind and their training; 2d. To the moral condition of the personnel, which includes the chief as well as the soldiers."

The author is satisfied with the supply of good horses obtainable in Russia,—not so as regards their training, and on this point he speaks as follows:

"A short time after the Crimean war we admitted frankly, in our cavalry, the necessity for increasing its mobility, and directions were given to render the troop horse light and manageable.

"To attain this end we commenced to make severe marches, to organize race courses, steeple chases, etc., and, all this being done without preparatory training, the only result obtained consisted in ruining the horses, and so this system was abandoned. Then commenced our other period: scouts to long distances, sixty-five to one hundred and thirty miles in twenty-four hours; scouts executed by officers accompanied by half a score of men chosen from the whole regiment; as a matter of course these scouts, thus carried out, could have no practical result, as they were conducted by only a few men and, in their very essence, had no definite end in view.

"As a final result we proved, in the last war, that the horses of our cavalry were very poorly prepared for work; and so poorly trained in time of peace that, on both theatres of war, our regiments of regular cavalry began to break down after two or three severe marches.

"Notwithstanding this, during the war of the Caucasus, certain regiments of dragoons, mounted like the others, and having been on campaign duty for several months, made marches of forty miles in twenty-four hours, not only with all their baggage, but also transporting three days' forage and five days' rations, and, after so rough a test, they were in condition to give battle.

"Comparing these two facts, we cannot explain the difference existing in favor of the second, except by recognizing the fact that, at the time of the war against the mountaineers of the Caucasus, the

horses of the dragoons had been kept in good condition and were worked almost continuously and thus became absolutely inured to fatigue. This fact inspires the conviction that it is necessary to give careful attention not only to the school training, but also to the general training of the troop horse, since, thanks to the railroads, any detachment of cavalry can be rapidly transported to the theatre of war, and there suddenly begins hard service for which, consequently, it ought to be prepared in time of peace. The most natural and most rational method of obtaining this end consists in marches in which regiments or entire squadrons are united under their chiefs, all the officers being present, the trains complete, and in which the rules of marching in time of war are observed. It will be advantageous to execute, once a week, an exercise of this kind, pushing out to a distance of thirteen to sixteen miles from the garrison, and, moreover, executing it in a fixed time, so that the entire march, going and returning, will not require more than one day.

"The regulations for the instruction of the cavalry troops prescribe the execution of marches of ten to thirteen miles by all the fractions, corps or detachments of the army; even the details of these marches are therein prescribed. Unfortunately, the dispersion of our cavalry in small detachments prevents these marches from being made as the regulations design, and that in all the detachments without exception."

The fact that the regulations on this subject are not punctually observed, is attributed to the smallness of the ration, about nine quarts; this is recommended to be increased for evident reasons. To continue:

"We can see that exercise is necessary and profitable from the fact that the greatest ability to endure fatigue has always been a characteristic of *natural cavalry*, if we may so express ourselves; that is to say, of our Cossacks, of mountaineers, of the Calmucks, of the Tékés and of other tribes of horsemen. We may ask where, when and how they and their horses are trained to fatigue. Evidently, it is not in the riding school nor on the square, but only by constant practice in rapid rides to long distances, resulting from their mode of life. To acquire, at least in part, this untiring energy of men and horses, our regular cavalry ought to be trained not only to long marches (for good cavalry twenty-five or thirty miles are a mere bagatelle), but to long continued marches conducted with judgment. These exercises should only take place in temperate seasons, that is, when the cold is not below forty-five degrees F. On the return from the march, the horses must be inspected. In this way the chief may impress upon the men what the horse ought to be to the rider, that one cannot exist without the other, and that he ought to care for his mount more than for himself. As an example, we may cite the mountaineer or the nomad of the steppes, whose horse is his best friend; in campaigning, this is easily understood,—the horseman feels the value of a horse, instructed and trained, which carries

him away from danger or which overtakes an enemy; but such an experience acquired too late costs dear and is dangerous. * * *

"We may assume, as a rule, that cavalry can make daily, at least twenty-five to forty miles, and that marches of sixteen miles should be exceptional. Short marches in time of peace are excellent for infantry, but pernicious for cavalry, who thus get into the habit of marching at a slow gait, a thing to be avoided if we wish to render ourselves mobile and suited to modern war. It should be well understood that, for the army, time of peace is not the time for repose, but for preparation for war; consequently, if the necessities of war demand a cavalry mobile to the highest degree, the latter should be instructed in conformity with these demands, and the horses should not be eternally kept in the riding school or on the maneuver ground."

This Russian General attacks the ordinary methods of instructing cavalymen in quite as severe terms, affirming that not less than a year should be devoted to the individual training of the young soldier. Lost in the ranks of the squadron he is too apt to forget all he has learned, to ruin his horse, and to become confirmed in every bad habit. By increased attention to early training, all matters will be begun with method, and it will be found much easier to form and keep good habits than it is to rectify vicious ones already acquired.

It appears on the whole that most services have things to grumble about, and we find in this paper, our own everlasting complaint that we cannot get our men for military purposes, that we have men of all stages of instruction mixed up together, simply because it is impossible to get a respectable command in line without it.

Speaking on the subject of irregular cavalry, the writer is inclined to deplore the introduction of Cossacks into regular divisions, and he gives the familiar arguments that the former troops are losing their former warlike qualities as a result of the change. In operations of an independent or partisan character, he would assign the Cossacks to the task, reserving the regulars, as a rule, for the field of battle.

The paper ends with some good ideas on cavalry leadership:

"A happy selection of chiefs is certainly of great importance in all arms, but the chief in the cavalry must particularly possess initiative, presence of mind, decision and energy. The necessity for these qualities results not only from the special character of cavalry, not so much from the arm, but from the particular circumstances in which the chief of a party of cavalry may find himself suddenly placed in time of war. A hesitating and apathetic man, however well instructed, should never be selected as a chief of a cavalry detachment. In such hands the best troops will soon be worthless and incapable of rendering the services expected of cavalry. A good chief of cavalry should have a generous supply of good sense, should be impregnated to the very marrow of his bones with life, with en-

ergy, with love of his profession, and he should remember that his bearing in service will for all time affect and influence the military spirit of his subordinates.

"I happen more than once to have heard said of a chief of cavalry: 'He is full of good qualities, he is energetic, he rises early, he is active, and he would be good in time of war, but he is unbearable in time of peace, he unsettles the nervous system of his subordinates.' Personally, I do not agree with the opinion that an effeminate, apathetic and lazy chief is less dangerous in time of peace than in a campaign, and, passing that by, I much prefer a chief who unsettles the nervous system of his subordinates to one who unsettles the detachment confided to him and renders it useless in war.

"We know what cavalry has been worth in the hands of men of valor with the knowledge of the profession of the cavalryman, such as a MURAT, a ZEIDLITZ, a DOROKHOV, a FIGNER, and their successors in modern times, a STUART, a SHERIDAN, a GRIERSON."

JOHN P. WISSER.

Lieutenant, First Artillery.

HOW A RUSSIAN OFFICER RODE TO THE EXPOSITION.

[By J. PAVLOVSKY, in *Supplément Littéraire du Figaro*.]

TRANSLATED BY MRS. E. W. LATIMER, LITTELL'S "LIVING AGE."

LAST autumn, when the imperial maneuvers were taking place in southern Russia, a number of young officers seated round the table of one of their number began discussing the various qualities of the war horse of Russia. They all agreed as to his strength and his powers of endurance. From horses to horsemen was no great step, and they went on to relate the various equestrian exploits known to them. Especial mention was made of a certain Count ZUBOVITCH, who, fifteen years ago, rode to Paris from Vienna. This exploit had been always considered by sporting men something remarkable.

"I could do more than that. I am ready to ride from this place (Lubny) to Paris," quietly remarked Lieutenant MIKHAEL ASSÉEFF, of the Twenty-sixth Dragoons.

The rest of the party laughed.

"On what kind of a horse?" said one of them.

"On any horse, so long as he is a Russian charger."

This assertion seemed so rash that those present looked on their comrade with amazement. ASSÉEFF was a well-built young man, with a resolute look in his face, soft eyes full of intelligence, and his comrades knew him to be incapable of making a vain boast about anything.

"Your horse would give out long before you reached Paris, and yourself, too," said one of them, gravely.

But ASSÉEFF was not a Cossack officer for nothing. He was thoroughly familiar with horses. He was not only a remarkably skillful rider, but was gifted with what we call in Russia, an iron frame.

He persisted in declaring that such an exploit was quite possible, not even very difficult.

When the party broke up that evening the guests went back to

their quarters, whispering among themselves that ASSÉEFF was a queer fellow, with some odd ideas in his head.

After that, whenever two or three of them met him, they invariably asked him the same bantering question, with good-humored irony:

"Well, ASSÉEFF, when are you going to set off for Paris on horse-back?"

"I'll wait for the opening of the exposition," was invariably his answer.

At last, spring came. The young lieutenant got leave of absence, and a passport, and then he disappeared.

Nothing was heard of him for two weeks, and then it was in connection with a somewhat curious circumstance. He had been arrested at Novgorod-Volink by order of the *ispravnik* or chief of the district.

It was a blunder, but a very natural one. The too zealous official had been informed that a young man, wearing a leather vest cut after the Swedish military fashion, browned by the sun, and covered with dust, was passing through the town on horseback, leading another horse by a leading-string. His bearing was thought to be that of a soldier. His holsters, his saddle-bags and his cloak, rolled up in military style, were all his baggage.

Whither was he riding in such haste? And this question being asked him, the young man had answered, "To the frontier."

The nearest frontier was that bordering on Austria. Now, just at that moment, all the newspapers were writing about three Austrian officers who were visiting the frontier, drawing plans and taking notes. Two had been arrested, but the third was still at large. Was it not evident that this young man was the spy—the man wanted by the police at St. Petersburg? True, his papers seemed all in order, but everybody knows that those whose conscience accuse them of wrong doing take care to have their passports all right.

So the spy was marched off to the watch-house.

When he was searched, loaded pistols were found upon him, a guide-book, and a portfolio full of stenographic notes. All these were convincing proofs of his culpability.

The watch-house proved to be the place of residence of the *ispravnik*. Duty may demand severity, but it does not exclude courtesy. Besides, an Austrian officer on service, and a Russian officer on half-pay are, after a fashion, comrades; so, until the affair should be cleared up, the spy was invited to take his meals at the family table, and was seated next to the master of the house. This gave great un-

easiness to the lady of the *ispravnik*, who whispered to her husband to be on his guard; for suppose the Austrian officer should commit such an impropriety as to strike a blow under the table with his dinner knife at the representative of the autocrat of all the Russias!

But her husband had made up his mind to risk everything. He meant to discover the truth should it cost him his life.

"Tell me now frankly," said he to his prisoner, "since you are caught, what were the instructions given you by your government?"

The criminal's only answer was a hearty laugh.

This detention cost ASSÉEFF two days. It was his first, but not his last adventure upon Russian soil. Everywhere he met with great suspicion. Though he took the precaution whenever he entered a town or village to call at once upon the chief of the rural police, the *stanovoi*, or on the *ispravnik*, he was not always made safe by this prudent measure.

One day in a little village near Kiev, a rural policeman would not let him pass till he had minutely scrutinized his papers. He got off at last, and had ridden about twelve miles from the village, when he found himself pursued, and heard cries of: "Stop! Stop!" It was the rural official. "Well, what is the matter now?" "Our chief has ordered me to take a copy of all your papers."

In selecting his route MIKHAEL ASSÉEFF followed the example of the Emperor NICHOLAS, who, when he was presented with the plan for the construction of a railroad from St. Petersburg to Moscow, which showed abundance of crooks and curves, took a pencil and drew a long straight line between the two capitals, quietly remarking:

"That is the line which I wish followed." Like him ASSÉEFF thought that a bee-line is the shortest road between two places. He stretched a silk thread across his map of Europe, from Lubny, a little town in southern Russia, to Paris, and made that his route.

On Russian soil, which it took him two weeks to get over, he found his way without any serious difficulty. His road was plain before him, but when he reached Bohemia and Bavaria, the grand duchy of Hesse-Darmstadt, and that of Luxembourg, his route lay up hill and down nearly all the way. As it grew dark he often came near breaking his neck over rocks and precipices.

ASSÉEFF made no halts for rests, and he rode at least eleven hours a day. When he reached the inn where he proposed to pass the night there was no rest for him. He had to see about stabling his horses, and to wait until they were cooled off before giving them water and food. He never trusted this office to anybody, and it took him about

two hours to give them proper care. When at last he could sit down to his food he had to satisfy public curiosity, the whole village turning out to look at, and ask questions of the mysterious traveler. However he might be bored, he knew it was good policy to conciliate the villagers, and so get them to give him local information which might be of use to him *en route*. All this may be easy enough when one can speak the language of the country, but ASSÉEFF was not proficient either in German or French. At last when his interviewers retired, he was free to make his bed in the stable with his horses.

Two ideas haunted him during his long thirty days' ride. What should he do if his horses were stolen, or if they fell sick?

Twice he had to have them shod by strangers, and even now he cannot tell you what he felt, without emotion. Suppose they had either of them been lamed by the careless driving of a nail! All would have been lost. When a man succeeds in an unusual enterprise every one is charmed with his performance. If he fails they jeer at him, and even if the failure be due to mere accident or a loose horse shoe.

"The first time I had to take my horses to the forge of a village blacksmith," said ASSÉEFF, "I went off, not having the heart to be present at the operation, the thought of which to me was absolute torture, but I had to come back, for my horses could not understand the blacksmith. They wanted me as an interpreter."

One of ASSÉEFF's greatest difficulties at first was to prevent the flagging of his horses. They had been used to regular exercise, and to abundant food, and could not have borne at first any unusual fatigue. ASSÉEFF put them through a special training to accustom them to the work he expected to get out of them.

At first their food was only bran and hay, then equal parts of bran and oats, then only oats with sometimes a little salt. The horses ate never less than thirty-seven pounds of oats and nine pounds of hay a day.

In proportion as he increased their food, ASSÉEFF required more work and more speed from his horses. At first they made about thirty miles a day, but by the last week they could accomplish more than seventy.

He himself observed no special regimen. All through his journey he slept only five or six hours daily, and after the first week he felt no fatigue. Indeed, after riding fifty miles and being eleven hours in the saddle, he dismounted as fresh as if just beginning his day's journey.

As long as he was in Russia the days did not seem to him long, but after he had passed the frontier they became very wearisome.

"I had no resource," he said, "but to refresh myself with a few mouthfuls of good brandy, and I had nobody to speak to. The Germans seemed to me all alike. I could take no interest in them."

It must be owned that ASSÉEFF took little interest in the countries he passed over. His interest lay in matters connected with his journey. The question that interested him most was one that he found himself obliged to solve by his own experience. Which was best for speed in the long run and for the health of the horse, to walk or trot, and if trotting, how much rest was necessary? He arrived at the conclusion that the best way was to let the horse under the saddle, make the best time possible. His day's work was regulated in the following manner: First he started at a walk, then took five minutes' trot in every half hour; then five minutes' trot every quarter of an hour, and then steadily ten minutes' walk to ten minutes' trot. In this way he was able to make between six and seven miles an hour.

ASSÉEFF's two animals were mares. One, called Vlada, was seven years of age, and was of the breed of Little Russia. She was only a troop horse. The other, Diana, was a cross of English and Russian blood. She was five years old, and had belonged to an officer. Both were ridden, turn and turn about, according to the Turkish custom. The first twenty or twenty-five miles were made on Diana, the remainder of the day's journey on Vlada. When Diana was ridden, Vlada, who was an animal of extraordinary intelligence, would follow of her own accord, being sometimes a hundred yards behind. She would stop to graze, or to drink in little streams, from roadside fountains, or from the pails of peasant women; but if she lost sight of Diana she neighed anxiously, and came up with her at a gallop.

Both rider and horses suffered much from heat. The hoots of the latter were disposed to crack, and they had to be softened with glycerine. Along the highways, at the inns, and in the towns ASSÉEFF was besieged with questions as to where he was going; to which he always replied: "To Belgium, to the stud farm of Professor REUL."

He did not like to tell the Germans that he was bound for France, fearing to create difficulties. At every frontier he was bothered by the officers of the custom house, and he had to pay a drawback on his horses. This done, a ribbon was hung round the horse's necks, the two ends of which were fastened by a leaden seal, which also served as a sort of passport for the rider. Every time a local policeman showed any doubt as to the authenticity of his papers, ASSÉEFF pointed to the seal affixed to the ribbon.

One day on the frontier between Bohemia and Bavaria a sentinel refused to let him pass on horseback. He insisted that he and his horses could only cross the border by rail. This requirement seemed absurd and humiliating. "I have ridden an immense distance," said the Lieutenant, "just to prove what I can do without a railroad."

The sentinel referred the question to his superior, and he in turn to his chief, who, won over by the beauty of the two horses, permitted them to go on.

After twenty-seven days' journey, one morning at ten o'clock ASSEFF crossed the Luxembourg frontier, and was in France. Two soldiers siezed the bridle of his horse.

"Where are you going?"

"To the Exposition."

"Where do you come from?"

"From Russia."

The guard was so astonished that they hesitated to let him pass, in spite of his papers being in order. They took him to their officer who gave him a guard, by whom he was escorted to Longwy, where he was carried before the chief custom house officer. At Longwy he was received with open arms. The inhabitants rushed in crowds to see a Russian officer, the representative to them of a great power, their country's ally, and he was overwhelmed with sympathetic demonstrations. When he rode off in the midst of friendly acclamations, the street *gamins* accompanied him nearly six miles. He put them, three at a time, upon Diana, and they were proud to prance along beside a Cossack. They were not the least afraid of him, and wanted him to let them go on to Paris.

At last, on the thirtieth day, through a thick fog, the Russian officer caught sight of the object that was to end his journey, the Tower Eiffel. Greatly inspirited, he urged his horses forward, and an hour afterwards entered Paris. He had ridden seventeen hundred miles, and had been three hundred and thirty-nine hours and a half in the saddle, but he seemed as fresh and gay as if he had been taking a mere ride for pleasure. The only physical change he could perceive in himself was that he had lost eight pounds.

The singular exploit of ASSÉFF has drawn on him the attention of his Russian military superiors. The Russian military attaché at Paris, Baron FREDERICKZS, was expecting his arrival, and had telegraphed to the frontier, begging the authorities to send him word when the Lieutenant passed them. But when the telegram was sent the Lieutenant was already in Paris, never suspecting that he was an object of interest to the Russian embassy.

General FREDERICKZS received him very cordially and presented him to the French Minister of War, who kindly offered him quarters for his horses in the stables of one of the French cavalry barracks, and the privileges of a French officer.

Reader, if you find yourself in Paris, and meet upon the boulevards a tall young man of twenty-five, handsomely dressed, and with something peculiarly gentle in his looks and manners, you will find it hard to believe that he is the man who made this wonderful journey from Russia, a feat unparalleled in the annals of European equestrianism.

LETTERS ON CAVALRY, BY PRINCE KRAFT ZU HOHEN- LOHE-INGELFINGEN.

TRANSLATED BY COLONEL R. F. HUGHES,
INSPECTOR GENERAL, U. S. A.

FOURTEENTH LETTER.—SQUADRON EXERCISES.

WHEN I come to speak of cavalry exercises, the time of the year when these take place seems to me to be a matter of so much importance that I can not avoid beginning with it. In earlier days, cavalry of the Guard in Berlin got through the regimental course of instruction in time to pass inspection about the middle of the month of May. In order to do this the instruction of the squadrons had to begin about the first of April; and, even then, the time was very short for accomplishing the work required, say about three weeks. Many things had to be passed over hurriedly and were not thoroughly mastered. The worst of it was, that the exercises of the squadron and regiment, which are the most trying of the annual course, fell at a period when the horses were shedding their hair, were weak, and easily made sick. On this account the inspection of the cavalry regiments in Berlin was, several years ago, postponed until about the middle of June. The squadrons must complete their instruction by the middle of May and be ready for the inspection. The special conditions existing at Berlin did not admit of fixing a later date for the completion of the spring instruction; for, at the capital, the Guard troops must be ready as soon as possible for all peace evolutions, it being among the possibilities that the appearance they present before foreign rulers or ambassadors may have a greater influence on the course of politics than many an action in war.

The great body of our cavalry, being accustomed to observe and copy the manner of instruction pursued in the Guard without other authority than general consent, also designated the middle of May as the end of the squadron exercises, but there was no positive requirement for this. The Guard had a second course of instruction

in the summer in recognition of the fact that, in the spring, it was not possible that everything could be done with sufficient thoroughness.

I found, upon taking command of the Twelfth Division, that it was customary to inspect the instructed squadrons on or after the 15th of May. The commanding general had taken the wise precaution that each body of troops should be inspected but once during the period of instruction concerned, by which their training was greatly furthered, as the troops were not deprived of their time for instruction by any more days of inspection than were absolutely necessary.

The various inspecting officers had to arrange to make their inspections on the same day. I myself, as well as the brigade commanders, joined the regimental commander when he made his squadron inspection. At the first of these inspections on the 15th of May and succeeding days, I perceived that the squadrons stationed in the climate of Upper Silesia, where the winter lasts longer than in Berlin, had to go through the course of squadron instruction during the early spring when the temperature is most changeable, when on very warm days the horses shed their hair freely, while on cold, snowy days the process is suddenly interrupted. The horse is injured by such changes and should be spared, instead of which he is especially tried by the exercises; the conditions are conflicting. The result is that either the horses are much debilitated or the squadron is not properly instructed. For the following year I fixed the time for the squadron inspection in the latter part of June, so that by the end of June the last squadron must be inspected. I remember well the look of thanks with which my order was received by those squadron-chiefs who were interested in the welfare of their horses.

The result proved so satisfactory that the following year I was confirmed in my decision. This enabled the squadrons to postpone the detailed instruction in equitation until the end of April. Every zealous cavalryman will feel how necessary it is for correct company equitation that the entire month of April be given it for the purpose of putting on the final finish. Every cavalryman knows how much less a thoroughly broken and trained horse is fatigued by such changes and exertions as are unavoidable during instruction, than a horse that has to contend against many difficulties that he has not yet overcome.

During the latter part of April and first part of May the regimental commander makes the final inspection of the detailed instruction in equitation. The following fortnight may be occupied either

in exercises of the troop and the platoon, or specially devoted to bringing up, in their instruction, such young, or not fully educated, horses as the regimental commander may have designated at his inspection as being in need of improvement. The squadron-chiefs have, in this way, the necessary time to carry into effect the instructions given by the regimental commander at his inspection the same year.

The squadrons formerly completed their exercises about the middle of May, at which time they now begin them. They even have sufficient latitude to postpone them a few days longer if, owing to stormy weather the shedding period has been delayed, for they have almost six full weeks for this period of instruction.

I shall disagree perhaps with many old squadron-chiefs who have become accustomed to the short, hurried period of exercise. They will say that too much time is thus employed, that nothing is gained by exercising too long and too much, that it wearies the mind, and that finally no improvement is made. My experience, however, has been different. The main thing, after all, is that the horse, which is more an animal of habit than the man, must be gradually accustomed to the exercises and to the exertions required of him.

To accomplish this a long period is necessary, and it should immediately follow the period devoted to the course in equitation, during which the distance covered at a trot and gallop have been gradually increased and have at last reached a length that justifies undertaking the instruction of the squadron as a unit. It is only by this systematic training that the horse can be put into condition to meet the requirements of an attack, trotting and galloping five miles without either injuring himself or being blown. The fat which the horse has accumulated must be gradually worked off. If this is attempted too suddenly, inflammation of the lungs may result. The riders must also be gradually accustomed to long trots and gallops. They must not only be in condition to execute them, but they must not become excited while so occupied. The young recruit can only become accustomed gradually to the sharp gallop, the noise of the trampling horses about him, the clouds of dust and the sharp wind; he should find pleasure in them, should feel himself perfectly at home, and hold eye and ear open for the sign of command of his leader; he should not tire, but such movements should be stimulants to him. A cavalryman who feels thus, is less heavy on his horse and does not fatigue him like a rider who is filled with anxiety, and who, by crowding and with a heavy hand, gives the poor horse wrong guidance with the bridle and halter.

It is therefore rational treatment of the squadron to gradually increase the exertions of the horses during the course of instruction in the evolutions in such a way that, finally, this requirement can be answered without injury to them.

I have previously stated that I have seen this done, and that no horse in the squadron was blown. The horses were also in good condition, without unnecessary fat, but round, muscular and solid.

In order that the minds of the commanders of squadrons and troops might not be worried by the exercises being extended over six weeks and, likewise, in order that no time might be lost from the other branches of instruction, I designated the end of June as the initial date for field work, and directed that the course of instruction in target practice should be well advanced by that date, and that both branches of instruction should be completed by the end of July. The instruction in target practice, and in field work, can go hand in hand with the drills fairly well.

It is not absolutely necessary that the horses be exercised in the open air every day in order to get them in good condition "of wind." They might be left stationary for one or two days in the week besides Sunday, but daily exercise in the open air is beneficial to the general health of the horse. This latter consideration has given rise to the following routine: squadron exercises three or four times a week, (in going to and in returning from the drill grounds each command must march in war formation, viz: with detachment of observation thrown out, measures taken against surprise, measures of security, reconnoitering patrols, etc., and in this manner firmly grounding the young soldiers in the forms and principles of this work); once each week field exercises should be practiced, and, if the good of the horses renders it advisable, this day's work should be at a walk or slow trot in light field equipment; once or twice per week they have target practice and the horses are ridden to the target ground at a walk and thus receive their needed exercise. On drill days they must go back to the elementary equitation of the riding hall, and not drill by platoons with a mixture of the instructed and uninstructed men and horses, but by classes (remounts, second and first classes, and recruits). Thus variation prevents *ennui*.

According to this arrangement, the inspection at the conclusion of the exercises of the squadron falls at the culmination of many branches of instruction, viz: the elementary exercises, drill by signals, battle maneuvers, elements of field service, riding by classes on the parade, individual combat; and, after the squadron is recalled, the young remounts are inspected in the riding hall. Naturally, so

many different branches of instruction cannot be thoroughly inspected without devoting a good deal of time to it, and it may shock a good many cavalymen who are not accustomed to it, when they hear that the inspection of a single squadron often requires from four to five hours. When there are two squadrons united in one garrison, and they can be inspected together, the inspection lasts from six to seven hours. It might be supposed that the horses would be injured; but that is not the case if the inspection is conducted with due regard to their strength, and, which is the chief point, if they have been put "in wind" systematically, in the manner previously indicated.

One apparent means of sparing the strength of the horses at inspection consists in not permitting them to be kept in parade position on the exercise ground. The parade position, and the time lost in waiting, absorb a considerable amount of the horse's strength. With the best will in the world, delays cannot always be avoided—the superior is detained by some unavoidable cause so that it sometimes happens that the squadron, which would rather be a quarter of an hour too early than half a minute too late, waits for full half an hour in the tiresome parade position. The result is a great exertion, and absorption of strength; and, besides, it frequently occurs that many horses from weariness become restless, refuse to stand on the bit, and the first alignment is entirely lost. The commander, who has aligned his troop carefully, gives the command for the salute upon the approach of the inspector, rides to the flank of his troop and is as much surprised as the inspector is dissatisfied to see his troop entirely out of line. I have seen a cavalry troop which I knew to be exceedingly well drilled excite, in this way, the extreme dissatisfaction or impatience of the inspector from the very beginning; then came a parade march at a walk in which the horses, on account of their waiting, were quite restless and fidgety, and the inspecting officer received a very unfavorable impression. If one is to see exactly the condition of a squadron and not how it may accidentally appear, it is recommended that it be directed to remain in readiness in the stable, that the inspector go there and order it out and witness its coming out and forming and wait until the squadron-chief reports that the squadron is formed in line on the stable ground. In this way the interior service of the squadron is seen. As the squadron thus stands, its equipment and arrangement and also its cleanliness can be carefully examined. The double result is obtained of an economy of time and of seeing the elementary field work during the march to the exercise ground. To accomplish this it will be suffi-

cient to require the squadron, in marching off, to carry out some very simple tactical idea.

The squadron arrives upon the drill ground at a trot and attacks a supposed, or represented enemy. If two squadrons are being inspected at once, one can be sent off first, and the other can follow and a collision can be arranged between the two on the exercise ground.

As a general thing in the elementary exercises, when there are two squadrons, one is first put through and then the other, the unemployed one dismounting in the mean time. During the elementary exercises, the parade position and the parade march may be introduced wherever desired. For relaxation, "the proficiency of the men in the use of arms" is then inspected. This is a real relief, for as one class is employed the others are dismounted and rest. In the class itself only two or three horses are at work while the others are at "place rest." Then follows the exercises in battle tactics and whatever the inspector wishes to see, going off at full speed, cutting and thrusting at heads, etc. Finally the squadron returns to quarters at a rapid gait, executing en route such tactical evolutions, and such field exercises as the inspector may call for. If such an inspection does not last over six hours it will not exceed the strength of the horses, for all the horses have had several rests and have stood nearly half the time with the bridle reins in the hands of the dismounted troopers. In the warm days of June it is a matter of indifference whether the horses rest in the stable or in the open air. The greater the rank of the inspector the more apparent it is that he cannot devote as much time to each individual squadron as this kind of inspection requires. I cannot refrain from remarking that my then commanding general, who was an enthusiastic cavalryman, very willingly undertook this kind of an inspection and if he did not have the necessary time, preferred to inspect but a part of the squadron rather than to make the inspection less thorough.

Allow me to mention a few more details that have appeared to me worthy of special mention in connection with the exercising of single squadrons.

I touched above upon the subject of drill by signals, which is authorized by paragraph 110 of the regulations of July, 1876. When this regulation appeared, a single squadron-chief exercised his troops in this way, not only as regards movements referred to in this paragraph of the regulations, such as to advance, to halt, and to change direction, but he also executed most of the platoon evolutions, such as breaking into column, and half column, forward into line, changes

of front, and changes of direction, and changes in gait, the latter by designating that the squadron must ride at the gait at which he rode. The other squadron-chiefs of the division soon followed suit. In order to secure harmony in these exercises, and in the signals employed, the brigade commander sought out those that proved the best and prescribed them for all the squadrons. In fact, he went farther than was provided for in paragraph 110 and things were occasionally seen that were forbidden by the order introducing the regulations. But the result was so important that I took no action. The chiefs threw their squadrons about over the exercise ground in all possible formations, and all gaits, without giving a single command. It produced a peculiar impression to see a squadron, without either a sound or command, noiselessly sweep across the plain. When the ground was soft and no trampling of horses' feet was heard, the cavalry came before me like ghosts guided by some invisible spirit, and it may be imagined that a command led in this way might succeed in reaching the flank or rear of an enemy and take him by surprise. The idea that a squadron could be led in such an artificial manner in the clash and turmoil of the evolutions of a great mass of cavalry was not, however, what I had reference to when I spoke of the important results of the experiment; but I consider it rather a means to an end. Troops drilled by simply observing the motion of a saber became accustomed to paying greater attention to their officers, and it accustoms the officers to keeping their eyes upon their leader.

The perfect silence of the squadron chief is impressive, and, in consequence, not a word is uttered in the squadron,—the habit of talking being one into which the troops fall, not through want of discipline, but through a desire to prevent mistakes. It may be stated that exercises by motions of the saber were more correctly and exactly executed than those by command; and that after they had been practiced, the result was apparent, in the greater precision with which movements were executed at all drills, whether by signal or by command.

The same paragraph prescribes that the squadron must be exercised in riding upon a designated object. I had a peculiar experience in this after assuming command of the division, viz: that when this riding upon a designated object is not specially practiced it is extremely difficult to strike the object. My orders that the squadron chiefs should make their attack upon me in person in the position in which I stood and should strike me with the center of their squadrons, were scarcely ever executed. Most of the squadrons shot by me. Still harder was it when I moved, if only at a walk. The

guide was *then* right; since that time, God be praised, the guide has been changed to the center, and the officer of the directing platoon gives the direction; the men really have to follow the officer, who is the guide of direction and gait and from whom the center guide (file) keeps his distance; this is a great improvement. But this exercise is very necessary and especially against objects which are in motion. The main thing is, that the squadron be able to attack the point against which it is directed. Of what use is all our instruction in equitation if the attack falls upon our friends instead of upon the enemy. In earlier times, before I had any cavalry under my command, I had frequently heard the fault found that the leader could not strike the object attacked; but no one showed the unfortunate, much censured, squadron-chief how it could be done, and they were never given time to learn it. Now, that the guide is changed to the center, it is necessary that the evolution should be frequently practiced and especially against objects in motion, as they will be in a hither and thither wavering cavalry action. If the guide (officer) rides at the full attacking gait and makes a change of direction in hurling himself against a moving object, the pivotal wing will be thrown into a confused mass while the outer wing will be thrown into open order. He must ride his curving line in moderate pace so that the outer wing will be able to come round, and the inner wing must keep in line with it; otherwise the attack will be an irregular one.

Let us say a word on irregular attacks. How often has it been written and said that attacks were too irregular and that they must be ridden in close order! But, my honored friends of all arms, all the saying and writing in the world will do nothing if it is confined to talking and fault-finding, and no one goes upon the field and demonstrates *why* the attack is *irregular* and *how* it is to be *remedied*. The regulations show how an attack is to be made on the level drill ground. Still more practice is necessary in making an attack upon a moving object. But that is far from sufficient.

If a troop has fortunately overcome all the difficulties of making an attack in line, if it has made attacks in line on the drill ground, even if it has been exercised in attacking moving objects, it will sometimes happen that this same troop will fall into disorder at the grand maneuvers, and reach its objective without cohesion and in disorder, when it should come up like a living wall. Then, there is much fault-finding, criticising and punishing, and the mistake is pronounced quite inconceivable and unheard of; but no one informs the much-reviled leader how, when, and where, the fault originated.

It is easy to foresee that the expressions, mob, band, horde, etc., will be immediately heard. But where was the trouble? How is it to be avoided in the future? I never heard an answer given to these questions.

Yet the cause of the failure was very apparent, and was sufficient excuse for it; and a friendly admonition, by simply calling the officer's attention to the cause, would have done more good than the most severe censure. In maneuvers, and in actual campaign, it is an extremely rare occurrence that a cavalry attack is made in a straight line, as practiced upon the drill-ground. Most attacks immediately follow a movement to the flank—a wheel by squadron—or a wheel into line of platoons—followed at the exact moment by the command, "Charge." Most squadron-chiefs, through their zeal and anxiety to act, keep their eyes upon the enemy and give the command, "Charge," with uplifted saber, immediately after the command, "Wheel," and do not look around to see whether the troop has completed the wheel or not. If the wheel is not completed, the wheeling flank cannot come up, and the attack must be irregular, for the pivot has too much the start when it moves off. This fault is much more apt to occur with dashing, bold squadron-chiefs who push forward far in front of their troops to throw themselves upon the enemy. They must be made to understand that, by such over-haste, they bring in question the results of all their care and bravery, and that a look, a single glance upon the situation of their squadrons, must precede their giving the command, "Charge." He who recognizes the root of this evil will see that it is easier to eradicate it by inviting attention to it in a good natured way, than by scolding and wrangling; for it springs from excess of zeal, and desire to act, and not from negligence or indolence.

Concerning the last subject of the exercises in detail that I shall touch upon, I know that my views will not agree with those of most cavalymen. This is the subject of the so-called minor school of the squadron. Many superior officers of the cavalry firmly believe that this course should be gone through and the greatest precision required at all gaits, that the squadron coming upon the drill in column of files right in front should be able to execute the right about, form threes, form twos, execute the left about, and then wheel into line and stand like a wall. From half an hour to an hour of each day's drill is devoted to this sort of thing. During all this time there must never be a shock, or closing up, otherwise, alas! alas! alas!

When I, with the *naïvete* of a layman, asked the reason of this, I received the answer: "This is absolutely necessary in order to preserve proper intervals when a squadron marching in a long column

comes to a narrow defile." In war, I have never seen the cavalry march otherwise than by threes, and not a single one of all the squadron chiefs whom I have interrogated, has ever made use of the above maneuver. How much care, strength and time is consumed in drumming the school of the squadron into the men's heads! How many horses are injured in the shoulder by being pulled up suddenly; how many are injured in the fetlocks in order to provide against a never occurring, but possible eventuality; how much time and strength could be spared for more important and more practical instruction, if so much value were not placed upon this so-called squadron school, if it were held to be sufficient for each man to know where he should be in the "right about," in wheeling "by threes," "by twos," etc., etc., and if the changing from one formation to another did not make an important part of the inspection! These exercises are so wearisome and annoying to the men that they have become proverbial in the cavalry, and when a cavalryman wishes to state that he administered a severe scolding to some one he uses the expression, "I set him right about." It would be much more to the point if they were taught to take up the trot in long columns, rather than the passage from one formation to another, for the chief thing is, that the gait, order, and cohesion should be good under all circumstances, and not that the changes of formation should be well executed. Is there still a cue hanging behind us which it would be well to cut off? My comrades of the cavalry will certainly not take this expression in bad part for I am certainly not unfriendly to them. Many squadron chiefs will certainly be thankful to me, and will say: Yes, if the regulations will provide that this squadron school shall not be inspected with the precision of a battalion of infantry, then I shall not weary my men so much with it.

NEW DRILL REGULATIONS FOR CAVALRY, U. S. ARMY.*

SCHOOL OF THE TROOPER—*Continued.*

Training Horses.

555. As in the U. S. Cavalry service but few horses are, as a rule, issued at a time, it ought to be possible in each troop to intrust their education to a few picked men, who should not be changed until the horses are sufficiently instructed to take their places in the rank.

Horses are trained by the best horsemen, under the supervision of an officer or non-commissioned officer, and the men employed in this most important part of the horse's education must be selected for their natural fondness for animals as well as for their patience, coolness and intelligence.

It should be carefully impressed upon the men that the horses may be made gentle and obedient by patience, kindness and fearlessness; that punishment is only resorted to when necessary, and then only administered immediately after the commission of the offence, that he may know why he is punished. No punishment should ever be administered to the horse in anger.

Restlessness and impatience frequently arise from exuberance of spirits or playfulness, which must be carefully distinguished from that which arises from viciousness and timidity. When restless, the horse should be handled quietly until he becomes calm; when submissive after punishment he should be treated kindly.

The power and qualities of the horse can best be brought out by kindness and encouragement. If harsh treatment is adopted he will become timid, then sullen, and at length violent and unmanageable.

The man should endeavor to inspire him with confidence, and he should gradually be accustomed to firing, beating of drums, etc.; and as one horse is apt to be governed by the actions of another, trained horses, which are indifferent to such sounds, should be interspersed among the new ones.

*The publication of the New Drill Regulations for Cavalry commenced with No. 5, of the JOURNAL, June, 1883.

The first object to be attained in training the horse is to render him gentle and tractable by progressive lessons. For this purpose all proper means must be employed, such as feeding, handling, patting him, taking up his feet, etc., and the practice of the longe.

When the horse will allow his feet to be readily handled and lifted, the trooper should practice gently tapping them to accustom him to the action of shoeing.

The trooper must endeavor to discover the horse's natural inclinations and to gain a thorough knowledge of his abilities, in order that he may know how to take advantage of these qualities in the future.

Every action of the soldier should have a tendency to induce the horse to have a full confidence that no harm is intended and nothing but kind treatment is to be expected.

On arriving at the troop the new horses should be led into stalls adjoining old and quiet horses and the troopers in approaching them for any purpose should do so quietly, and always take care to speak to them and gradually accustom them to their presence; they should be carefully fed and gradually accustomed to the government forage ration; as many of them will be entirely unused to eating oats, corn or barley, great care must be taken or serious trouble will follow. By commencing with the larger part of the ration consisting of hay, and bran, and, where possible, crushing or grinding the feed, the horse will gradually be brought to the habit of eating the service ration without injury to himself.

From their arrival the horses should be exercised one or two hours daily in the open air. For this purpose the new horse will be equipped with the halter only, and led by the trooper in charge of him, who will be himself mounted on a well trained horse. After a few days a bit may be placed in the young horse's mouth and the reins tied loosely and thrown over his neck.

The Cavesson and Longeing. (Plate.)

556. The cavesson is a light halter, with the brow-band, throat-latch and cheek-pieces like the bridle head-stall, and has a nose-band that may be adjusted with a buckle. A ring in which to fasten the longeing strap is attached to the front part of the nose-band about two inches in front of each cheek-piece square; there is also a running ring in the chin strap for the longe. The longeing strap is from twenty to thirty feet long. The lariat may be used.

The snaffle bridle having been properly fitted, the horse should be encouraged and the cavesson put on; the nose-band should be

placed about three inches above the nostrils, so as not to affect the horse's breathing; it should act both as a nose-band and curb, and should go over the snaffle. It must not be buckled so tightly as to make the horse uneasy. An additional strap from cheek-piece to cheek-piece under the jaw-bone will keep the cavesson back from his eyes. These preparations should be made with great care so as not to alarm the horse.

The first lesson to be taught a young horse is to go forward. Until he does this freely nothing else should be required of him. When he obeys freely he should occasionally be stopped and caressed.

The practice of the longe is to supple and teach the horse the free and proper use of his legs. It thus aids in forming his gaits and in fitting him for the cavalry service.

This lesson should be begun on a circle from fifteen to twenty feet in diameter. As horses are usually fed, watered, saddled and led from the near side, they are inclined to lead better from that than the off side. It will therefore generally be found necessary to give two lessons on the right to one on the left.

If a horse hesitates or stands still when he is ordered to move on, he should be encouraged, as such hesitation oftener comes from fear or ignorance as to what is required than from obstinacy or vice.

The horse is first led several times round the circle at a walk. A man with a whip follows at a short distance and shows the whip occasionally if the horse is inclined to hang back. If this does not produce the desired effect, he should strike the ground in rear of the horse and at length touch him lightly with the whip until he obeys. After he has begun to move freely at the walk the man holding the longe should gently urge him to trot and gradually lengthen the rein so that the horse may scarcely notice it; he should continue to go round the circle at an active pace nearly opposite the horse's shoulder so as to keep him out and press him forward.

If the horse takes kindly to this lesson the man holding the longe may lengthen it by degrees, until he has only to turn in the same spot, the man with the whip being careful to keep the horse out to the line of the circle.

Should the horse break his pace, or plunge, the rein should be shaken horizontally without jerking, until he returns to the trot.

The trooper holding the longeing rein should have a light and easy hand. For the first two or three days the horse must not be urged too much; if he goes gently without jumping or resisting, enough is accomplished. He should be longed to the right, left and right again, changing from the trot to the walk and back again in

each case. He should be frequently halted by gently feeling the rein and speaking to him; and at the conclusion of each lesson, the rein should be carefully shortened and gathered up in the hand and the horse led to the center of the circle and caressed before being dismissed.

After a few days of the above practice, the horse may be urged a little more in the trot, but the greatest care and attention are requisite to teach him to use his limbs without straining them. Much harm may be done in this instruction by a sudden jerk or a too forcible pull of the longe.

Care must be taken that the lessons are not made so long as to fatigue or fret the horse. At first they should be short, and gradually increased in length as the instruction progresses. The man holding the longeing rein should take it short in one hand, at the same time patting and rubbing the horse about the head and neck with the other; he should then try to bend the horse's neck a little to the right and then to the left by means of the longeing rein; the bend should be in the very poll of the neck, and this exercise should be repeated at the end of each lesson, cautiously and by slow degrees, until the horse responds easily: this will greatly facilitate the future instruction of the animal. The longe will be used to instruct the new horses, especially if timid, to jump the bar and ditch.

Before commencing the bending lessons, it is well to give the horse a preparatory one of obedience, to make him sensible of the power man has over him. This first act of submission will prove of great service; it makes the horse quiet and gives him confidence, and gives the man such ascendancy as to prevent the horse at the outset from resisting the means employed to bring him under control.

Go up to the horse, pat him on the neck, and speak to him; then take the reins off the horse's neck, and hold them at a few inches from the rings of the bit with the left hand; take such position as to offer as much resistance as possible to the horse, should he attempt to break away; hold the whip in the right hand, with the point down; raise the whip quietly and tap the horse on the breast; the horse naturally tries to move back to avoid the whip; follow the horse, at the same time pulling against him, and continuing the use of the whip; be careful to show no sign of anger nor any symptom of yielding. The horse tired of trying ineffectually to avoid the whip, soon ceases to pull, and moves forward; then drop the point of the whip and make much of him. This repeated once or twice, usually proves sufficient. The horse having found how to avoid the

punishment, no longer waits for the application of the whip, but anticipates it, by moving up at the slightest gesture.

557. The running-rein is of great value in teaching a horse to keep his head in a proper position, and affords valuable aid in his first handling. If judiciously used it saves the rider a great deal of trouble and the horse much ill usage, and simplifies the subject of "bits and biting." It is especially useful in controlling horses that are inclined to bolt.

It should act directly on the snaffle-bit itself and is wholly independent of the reins.

The running-rein consists of three parts; the chin-strap, rein and martingale.

The *chin-strap*, about six to eight inches long, on which is suspended a loose ring, is fastened to both snaffle-bit rings. The *martingale* has only one ring; the loop, through which the girth passes is made adjustable by a buckle. The martingale is so adjusted that when taut, the ring will be on a level with the points of the horse's shoulders. The *running-rein* is about eight and a half feet long; one end is buckled into the near pommel-ring; the free end is then passed through the martingale-ring from rear to front, thence through the chin-strap ring from left to right, thence through the martingale-ring from front to rear and is held in the rider's right hand.

A pull on this running-rein will act directly on the mouth-piece, drawing it back and somewhat downward toward the horse's breast-bone.

Bending Lessons.

558. These lessons should be given to the horse each day, so long as the snaffle-bit is used alone; but the exercise should be varied, so that the horse may not become fatigued or disgusted.

The balance of the horse's body, and his lightness in hand, depend on the proper carriage of his head and neck.

A young horse usually tries to resist the bit, either by bending his neck to one side, by setting his jaw against the bit, or by carrying his nose too high or too low.

The bending lessons serve to make a horse manageable by teaching him to conform to the movements of the reins, and to yield to the pressure of the bit. During the lessons the horse must never be hurried.

559. *To bend the horse's neck to the right.* Take a position on the near side of the horse, in front of his shoulder and facing toward his neck; take the off rein close up to the bit in the right hand, the near rein in the same way with the left hand, the thumbs toward each

other, the little fingers outward; bring the right hand toward the body, and at the same time extend the left arm so as to turn the horse's head to the right.

The force employed must be gradual, and proportioned to the resistance met with, and care must be taken not to bring the horse's nose too close to his chest. If the horse move backward, continue the pressure until, finding it impossible to avoid the restraint imposed by the bit, he stands still and yields to it.

When the bend is complete, the horse holds his head without any restraint, and champs the bit; then make much of him, and let him resume his natural position by degrees, without throwing his head around hurriedly.

A horse, as a rule, champs the bit when he ceases to resist.

The horse's neck is bent to the left in a similar manner, the man standing on the off side.

560. *To arch the horse's neck.* The trooper at Stand to Horse. Cross the reins behind the horse's jaw, taking the near rein in right hand, and the off rein in the left hand, at about six inches from the rings, and draw them across each other till the horse gives way to the pressure and brings his nose in. Prevent the horse from raising his head by lowering the hands. When the horse gives way to the cross-pressure of the reins, ease the hand and make much of him.

561. *To make the horse lower the head.* The trooper will now mount, and, taking the right rein in the right hand, the left rein in the left hand, will lightly feel the mouth of the horse. Then holding the hands low, he will play with the bit, gently drawing in the reins as the horse drops his nose. When the horse, opening his mouth, yields the lower jaw to the bit, and brings in his head so that the face is vertical to the ground, the rider will release the tension of the reins, and caress the horse for his obedience. By degrees the horse can be taught to depress the head to any extent.

562. *To make the horse elevate the head.* The rider will induce the horse to elevate his head by holding the reins separated, as described above, and with arms extended forward, make light pulls upward upon the reins. When the horse has obeyed, the rider will lower his hand so that the horse can lower his muzzle, and he will then quietly demand that the face of the animal shall be brought into the vertical position.

563. *To bend the head to the right.* The rider will hold the reins as previously described, and, drawing the right rein toward his body, he will carry the head of the horse a little to the right; the left hand will be used to measure the effect of the other, to keep the

face of the horse vertical, and to aid in keeping the jaw pliant. The rider should be satisfied with slow progress, but in time the head should be brought round so that the face, with the nose down, shall look to the rear. By this exercise the whole of the head and neck are suppld and made submissive. After the head has been bent to the right, the left hand, supported by the right hand, will carry the head back to a line with the body, and the vertical position of the head will be demanded by a play of both reins. In a similar manner the head will be bent to the left.

564. After the horse has submitted quietly to this instruction he will be required to move forward.

For this purpose the rider takes the snaffle rein in each hand and feels lightly the horse's mouth; the man with the longe leads the horse forward and longes him first to the left and then to the right, at a walk; if the horse shows any disposition to kick or plunge, the longe is shaken lightly to engage his attention and keep up his head.

After a few times the rider dismounts, the horse is petted and dismissed.

These lessons are continued until the horse can be made to go forward, to the right and left, to halt and rein back by gentle application of the aids.

*Throwing the Horse, etc.**

565. The horse is considered as an animal of a single idea; that he has no reasoning faculties beyond the limits of his experience, and consequently that we reason with him by acts alone. Early impressions are seldom forgotten and it is important that each move be correctly begun. In familiarizing him with objects that excite his fear or timidity, the horse should be allowed to smell or touch them with his nostrils, for in a certain sense they are to him what the fingers are to man.

The basis of the following system is the *throwing* of the horse, by which, in a personal contest, he is convinced of his own helplessness and of man's power over him. He is thus made to submit to man's control without exciting his resentment or suffering any other physical pain than that resulting from his own resistance.

The application of this system supposes the man to act with deliberation and good judgment; to speak with a kind voice and never to use harsh treatment; also that each trooper train his own horse, that the result may be to the benefit of both man and horse.

*The Tactical Board expresses to Captain G. A. Dobb, Third Cavalry, its indebtedness for communication on this subject, transmitted by the Adjutant General, U. S. A.

During each drill every horse present will be thrown or made to lie down three or four times, and in exceptional cases oftener. The application of the system will at first be confined to simply throwing the horse or making him lie down; and later to firing in the vicinity and then around and over him while in the recumbent position. These results are attained progressively. The system may also be applied for the purposes of disciplining refractory horses at mounted formations.

To attain the most satisfactory results the system must be applied with persistence and without long intermissions.

Infallible rules cannot be laid down for the proper training of all horses, as it will be found that each horse requires peculiar treatment.

566. The method explained is a modification of the one generally known as "*RAREY'S Method*." The horse is equipped with the watering bridle and surcingle. The surcingle is buckled securely, not tightly, around the horse's body just back of the withers. The horse is taken to an open space, preferably covered with turf, free from stones, sticks, glass, etc., to prevent injuring the horse's knees. The trooper is provided with two strong straps. "*No. 1*" is about ten feet long; one end of it about one inch wide, is made into a loop, or has an iron ring sewed fast. "*No. 2*" is about three feet six inches long, and from one and a half to two inches wide; one end having a strong buckle and two keepers (one on each side of the strap). In the absence of straps as specified, the halter strap may be substituted for "*No. 1*," and the stirrup strap for "*No. 2*."

• Put *No. 1* strap once around the off fore pastern, passing the free end of the strap through the loop or ring, making a slip loop, draw the strap taut and pass the free end over the horse's back from the off side and under the surcingle from front to rear, the free end hanging down on the near side; see that the loop around the pastern has no twist in it. Pass the free end of "*No. 2*" through the inside keeper and make a slip loop; raise the near fore foot, place the loop around the pastern with the buckle outside and draw it snug; raise the heel against the forearm, pass the free end of the strap, from the inside, over the forearm and buckle the strap sufficiently tight to hold the leg in this position. Let the bridle reins either hang down or place them on the neck; it is important that the off fore foot be kept from the ground after the horse first raises it, and this will be more surely secured if both hands are used at strap "*No. 1*" during the first plunge, although the horse will be prevented from plunging so violently if the reins be held in the hand and pulled down to prevent raising the head.

The trooper takes his place on the near side of and close to the

horse behind the surcingle, the left foot in advance; the left hand grasps securely the free end of "No. 1"; if long enough make a turn around the hand; the right hand grasps the same strap loosely, fore-fingers close to surcingle, back of the hand against the horse's back. Quietly and gently urge the horse to move; the instant he raises his foot pull the strap quickly downward with the left hand bringing the heel against the fore arm, the strap slipping through the right hand which should be kept in place, but which grasps the strap as soon as the foot is sufficiently raised, and holds it firmly; make a turn with the strap around the right hand and take both reins in the left hand on the near side of the horse. The horse is now brought to his knees; bring the horse's nose well to the left and raised, placing the right shoulder and arm against the horse's side thus indicating to him that he is to lie on his right side. It is probable that he will rear and plunge to free himself from restraint, but as he moves, so should the trooper, maintaining his relative position to the horse and a firm hold of the strap. Many horses will remain in the kneeling position for some time, and this they should be permitted to do until ready, of their own volition, to lie down; the trooper should not urge his horse further than by commanding down, in a deliberate but gentle voice, and this word is repeated at opportune times until the horse goes down; no other word should be permitted. The trooper will not be allowed to *push* the horse down, one object of this training being to teach the horse to lie down of his own volition, at command. After plunging about until exhausted, the horse will remain a short time in the kneeling position and then lie down. The trooper maintains his hold of the strap and reins until the horse is quiet and shows no immediate disposition to attempt to rise; or he has the strap and reins so placed that he can grasp them directly the horse attempts to get up.

To dispel his fears and reconcile him to his unexpectedly assumed position he should now be petted, spoken to in a kindly tone of voice, and generally made much of. When he becomes quiet and ceases to struggle, the trooper should pass around him, handle his feet, straighten out and rub his legs. If the horse shows no inclination to rise before being told to do so, the strap may be unfastened and removed, but so long as the eye shows a wild, startled expression the strap should not be removed. The eye is a true index of the horse's feelings and disposition, and if closely observed will always betray his intentions.

After remaining in the lying position for a short time, after the straps have been removed and he no longer struggles or attempts to

rise, or if he attempts to rise and he cannot be prevented from doing so, the trooper should raise the horse's head a little with the reins and command: Up.

When the horse gets up, he should be made much of and given to understand that he has done what was desired of him. Repeat this exercise three or four times at the first drill. In subsequent drills it may be had from three to eight times. It will be found better not to have the exercise repeated in rapid succession lest the horse become discouraged and disgusted.

To Teach the Horse to Lie Down Without the Strap.

567. The horse having been thrown and handled for several successive days, and there being reason to suppose he understands for what purpose the straps have been used, he may be taught to lie down without using them. The horse is equipped as before. The trooper raises the near fore-foot and holds it in the position as when strapped up, with the left hand, which also holds the reins; with the right hand he grasps the surcingle and pulls downward and commands: Down; holding the left fore-leg on the bent position until the horse drops on both knees. If the horse be slow in dropping on his knees, the trooper may lightly touch him on the off fore-leg, at the same time commanding: Down; under no circumstances should the leg be kicked or force used to compel the horse to bend his knees. If the horse has been sufficiently and properly instructed, he will kneel and lie down, after which he should be caressed and made much of. If the horse refuse to lie down both straps should be used at once, and the horse thrown several times before making another attempt to get him down without them.

If, however, the horse has obeyed the command, he should not in the earlier lessons be required to get down oftener than three times at each drill, nor should he be kept down longer than a few minutes.

To Teach the Horse to Lie Down at the Command of the Trooper.

568. The trooper holds the reins in the left hand; he lightly taps the horse on the leg with the right hand and commands: Down; the horse will probably turn round on his fore feet a few times, with head lowered, to make an examination of the ground, then drop on his knees and lie down. He should then be made much of. If the horse refuses to obey the command, raise the foot as in Par. 567, and if still obdurate use both straps as in Par. 566. But the trooper must persevere until by one of the methods the horse is compelled to lie down. It is at this stage that the greatest care and patience must be exercised, as harsh treatment, ill temper or failure to compel the horse to obey may defeat the advantage of previous instruction.

To Teach the Horse to Remain Quiet after Having Been Thrown.

569. It will be found that some horses, even after having been repeatedly thrown, will refuse to lie quietly after the straps have been removed. In such a case after the horse has been thrown the free end of strap "No. 1" should be brought down and fastened to "No. 2" on the near leg so as to keep the off fore leg in the bent position. The trooper may now quit the horse and permit him to struggle, kneel or plunge, without restraint, until exhausted and willing to lie down and remain quiet. The trooper should now handle him; if the horse makes no further struggles to free himself, and the eye indicates submission, the straps should gradually be removed. This lesson should be repeated until the horse remains quiet while lying down.

570. To hold the horse after the straps have been removed, place the knee against the horse's head just behind the ear, and securely holding the reins close to the bit, raise the horse's nose off the ground.

To Accustom the Horse to the Report of Fire-arms.

571. This part of the horse's education should not be commenced until he has become so familiar with the straps that he makes no resistance when they are applied, and has become accustomed to lying down. The trooper is armed with a revolver loaded with blank ammunition. The horse is thrown and secured as in Par. 569. He is then shown the pistol, allowed to smell it, made familiar with the sound of the cocking and the falling of the hammer, the trooper at the same time talking to and caressing him to allay his fears. A blank cartridge is fired near him. The horse will be startled, but his fears will be dispelled by kind words and caresses. The horse's fears having been quieted other shots will be fired, but the same precaution will be observed after each shot, as enjoined after the first one. At first vicious or very timid horses will probably rise to a kneeling position after each shot.

Great care should be exercised that the pistol be not discharged too near the horse's ears or so close to him that the powder will burn him; a horse once injured in this way will nearly always be nervous in the presence or during the act of firing.

This lesson is repeated several times. When the horse no longer flinches materially, nor struggles after a shot is fired, the straps may be removed and the drill continued; the trooper, however, places himself in a position to hold the horse down in case he attempts to get up.

The horses having been instructed individually will be made to lie down on the skirmish line and accustomed to the firing by volley and at will.

A horse having been thoroughly trained to remain quiet lying down during firing, will generally be indifferent to the firing under other circumstances, provided he has not suffered an injury from the fire-arm.

Management of Vicious Horses.

572. After a stubborn horse has been thrown several times, it may happen that he will not permit his fore foot to be strapped up, or a vicious horse may resist by rearing, plunging or kicking. In such cases another strap, "No. 3," may be necessary. It is simply a leather surcingle in which two iron rings, two feet, six inches apart are securely fastened. Two long straps "No. 1" are used. One is placed on each front pastern without raising the foot, the free end being run through one of the rings on the surcingle, and then both are held as a pair of driving lines by a trooper in rear of the horse; another trooper approaches and attempts to take up the near fore foot. When the horse strikes, rears or plunges, the trooper in rear pulls the lines taut and the horse is brought to his knees; after this is repeated several times the horse will allow his foot to be strapped up. Should the horse stand or refuse to move the whip may be used.

To Discipline Refractory Horses.

573. This same principle is used for disciplining horses which rear, plunge or buck when the trooper is mounted. In this case the mounted trooper retains hold of the straps and exerts sufficient force, when the horse is refractory, to bring him to his knees. This same means may be used to discipline horses which refuse to carry double, the trooper in rear holding the straps.

To Break the Horse of Kicking.

574. The horse is thrown: A "No. 1" strap is secured to each hind pastern; the free end of each is passed through the rings of "No. 3" and fastened to the bit rings. The horse is then made to get up and every provocation resorted to to make him kick. This is continued until he refuses to move his hind legs. The method used in Par. 572 is useful in this connection.

575. Another method for disciplining horses that balk, buck, etc., is to whirl them. The trooper being on the near side of the horse takes hold of the halter strap or bridle reins with the left hand about one foot from the head, draws the head around to the left, passes the

right hand over the rump, grasps the tail and makes the horse turn rapidly to the left several times until the horse becomes dizzy and nearly ready to fall. To start him and give celerity to his movements administer an occasional blow with the top of the foot across the buttock. By this method the will of the horse is brought into submission by a few moderate efforts of the trainer, lasting only a few seconds each.

576. Another method for throwing a horse for disciplinary purposes: Being mounted, reach forward with the right hand to the right of the horse's neck, grasp the left branch of the bit, pull the horse's head well around to the right, the nearer to his side the better, carry the right leg near to the left as in dismounting; make a sudden lurch to the horse's left thus throwing him off his center of gravity and bringing him to the ground; as the horse falls, the rider must push himself away from the horse, else he will fall under him.

577. Horses that shy, etc., may be treated in this way: Tie a rope with a slip knot around the body over the loins; the free end of the rope under the horse is passed between his fore legs and carried up through the halter ring and made fast to a suspended rope, sustained in place by guy ropes to prevent too much lateral motion.

The object in having a suspended rope is to prevent the horse from hurting himself and yet allow him freedom to move his haunches around. The picket rope if high enough will do.

The horse being thus secured, such articles as robes, blankets, etc., of which he may have shown fear are brought into his sight and he is encouraged to smell or touch them. Pistol firing, etc., is practiced until he ceases to show signs of alarm.

Gaits of Horses.

578. The *gaits* are the walk, trot, canter and gallop.

The *walk* is at the rate of four miles an hour, or one mile in fifteen minutes, or one hundred and seventeen and one-third yards in a minute.

The *maneuvering trot* is at the rate of eight miles an hour, or one mile in seven and one-half minutes, or two hundred and thirty-four and two-thirds yards a minute. For purposes of individual instruction the rate of the trot may be diminished to the rate of six or six and a half miles an hour by the commands "Slow trot." At the command "Trot out" the rate is eight miles an hour.

The *canter* is at the rate of eight miles an hour and is generally used for individual instruction.

The *maneuvering gallop* is at the rate of twelve miles an hour,

or one mile in five minutes, or three hundred and fifty-two yards a minute. The length of the stride is about ten feet.

The *full* or *extended gallop* is at the rate of sixteen miles an hour.

The *charge* is at full speed, and is determined by the speed of the slower horses.

To instruct in the maneuvering cadences, stakes are placed on the drill ground, on a convenient line for a long track, one hundred and seventeen and one-third yards apart. The troopers and guides are required to march over the spaces at the rate of one, two or three per minute according as the gait is the walk, trot or canter, or the gallop.

Instruction in each of the gaits must be practiced, individually and collectively, until each shall know whether he has the proper speed or cadence by the *rhythm of motion*.

Horses may be trained to walk in column under favorable conditions, four and one-quarter miles an hour, making 125 steps a minute, the stride being 0.98 yard.

The average walk of a horse is a mile in sixteen minutes, 3.75 miles an hour, making 120 steps (110 yards) each minute, the stride being 0.916 yard.

The average trot of a horse is a mile in eight minutes, 7.5 miles an hour, making 180 steps (220 yards) each minute, the stride being 1.22 yards; the trot for a column in route marches is at the rate of six and one-half miles an hour, one mile in nine minutes and fourteen seconds.

Multiply the number of yards passed over in one minute by .0341, or in one second by 0.046 and the result will be very nearly the rate of miles per hour.

Analysis of Gaits.

579. The walk is a gait of four distinct beats, each foot being planted in a regular order of succession; e. g., right fore-foot, left hind-foot; left fore-foot, right hind foot, and so on.

The trot has two distinct beats; the horse springs from one diagonally disposed pair of feet to the other pair; between the steps all the feet are in the air.

The canter has three beats, the regular order of succession being, e. g., right hind-foot, left hind and right fore-foot, left fore-foot, and so on. From the left fore-foot the horse goes into the air when cantering to the right hand.

The gallop has four beats, the regular order of succession being, e. g., right hind foot, left hind-foot, right fore-foot, left fore-foot, and so on; from the left fore-foot the horse goes into the air when galloping to the right hand.

Swimming Horses and Fording.

580. As it is often necessary for cavalry to cross streams by swimming, the exercise is important for young horses, to give them confidence.

The horses at first are equipped with the watering-bridle, and are without saddles. The reins are on the horse's neck just in front of the withers and knotted so that they will not hang low enough to entangle the horse's fore-feet; care being taken to have them loose enough to permit the horse to push his nose well out and to have entire freedom of the head. The horse should be watered before putting him into the stream.

The trooper mounts, rides into the stream and when he gets into deep water, drops the reins, seizes a lock of the mane with the upstream hand, allows his body to drift off quietly to the down-stream side of the horse and floats or swims flat on the water, guiding the horse as much as possible by splashing water against his head, only using the reins when the splashing fails. The horse is easily controlled when swimming; he is also easily confused; it is therefore necessary that the trooper should be gentle and deliberate. The trooper must be cautioned that pulling on the reins is apt to pull the horse over backwards. When the horse touches the bottom at the landing the trooper pulls himself on the horse's back and takes reins. The trooper will be cautioned that when the horse touches bottom he may begin to plunge.

The trooper may also be required to swim holding the horse's tail, allowing the horse to tow him.

After the trooper and horse have gained confidence, the trooper may be required to be seated on his horse while swimming. The trooper's weight presses the horse down and impedes his movements. The trooper should hold the knees well up to lessen the resistance, and steady his seat by holding on the mane or the pommel of the saddle.

The troopers will also be practiced in swimming the horses when fully armed and equipped. The stirrups will be crossed and secured. The sling belt will be taken off the person but attached to the carbine, which will be carried at "advance carbine;" the sling is left attached to assist in recovering the carbine if it should be dropped in the water; the horse is guided by the hands. The men are instructed in crossing running water, to keep their eyes fixed on the opposite bank.

581. When large, swift rivers are to be swum, too hazardous for all the horses to be ridden, the bridle reins are secured to avoid the danger of their being caught by the horse's foot, or that of an-

other horse swimming close to him, the stirrups are crossed and secured; a trained horse is selected for a leader and is ridden without a saddle; all the horses are led or driven to the approach and can generally be made to take the water without much difficulty. The approach should be selected at some distance above the landing. If practicable a few horses should be taken over and placed at the landing, and some men stationed near them to receive the horses as they land.

If there be a pontoon bridge in the immediate vicinity, the crossing should be below it.

When a horse is towed or led from a boat, he should be held astern of the oars, and on the down stream side or in the wake.

582. When a stream with a treacherous bottom is to be forded, stakes or brushes should be placed so as to mark the limits of the ford, or may be placed so as to mark the dangerous places only. When the stream is to be forded at night, lighted lanterns should be fastened to the stakes and one displayed at the landing, or a fire built there.

583. When the stream has a swift current and the water is above the horses' bellies, the sub-divisions should cross with as wide a front as practicable to permit a freer flow or prevent damming of the water which might carry a horse off his feet. The column of twos is less objectionable in crossing a dangerous ford than a column of fours.

Cavalry should generally cross streams above infantry or so far below that the water will not be dammed against them.

584. It sometimes may happen that there are no means of crossing the men who cannot swim. In this case the horses are placed in column, the halter strap of each horse is tied to the tail of the horse preceding. Those men who cannot swim are mounted on their horses. A trooper who can swim is mounted on a leader and he leads the first horse in the column with a lariat.

This method is hazardous, and much depends upon the coolness and skill of the leading trooper and horse.

CAVALRY HORSES.

585. Cavalry officers should make themselves thoroughly acquainted with the natural history and physiology of the horse, and with the effects of different methods of treatment, changes of diet, etc., upon his system and powers of endurance. An officer deficient in such knowledge will either have a troop lacking in efficiency and reliability, or make necessary the expenditure of large sums to supply the troop with remounts. Cavalry officers should familiarize themselves with the best methods of breaking and training horses.

All cavalry officers should have a familiar knowledge of the symptoms and methods of treatment of the diseases that are common to horses, what to do in emergencies, and a good knowledge of the effects of the medicines supplied to the troop.

It is the duty of the commanding officer to have his officers instructed in the foregoing requirements. To this end he prescribes such recitations and practical instruction as may be necessary, and frequently requires them to be present when sick horses are being treated and when horses are being shod.

586. Horses when received at the regiment, are assigned to troops according to color, under the direction of the commanding officer. They are branded on the near hip with the number of the regiment and the letter of the troop.

Each captain makes permanent assignments of horses to men. After a horse has been so assigned, his rider will not exchange him, nor allow him to be used by any other person, without the permission of the captain.

587. Troop commanders, the adjutant, and the regimental quartermaster, will keep a descriptive book of the animals under their charge, showing the name, sex, age, size, color, marks, brands and special peculiarities of each; how and when acquired; how long each has been in the service, and his fitness therefor; the particular use to which he is applied and the name of his rider. The date and cause of the death or transfer of every animal will also be recorded.

588. Taking the useful effects of a man's daily labor as unity, a horse can carry a load on a horizontal plane from 4.8 to 6.1.

A horse carrying a soldier and his equipments, say 225 pounds, travels twenty-five miles in a day of eight hours, including ordinary resting stops. A pack animal can carry 200 to 240 pounds for the same distance.

Ice of from 4.5 to 6.5 inches thick will bear cavalry marching in column of troopers or twos.

Treatment and Care of Horses.

589. Horses require gentle treatment. Docile but bold horses are apt to retaliate upon those who abuse them, while persistent kindness often reclaims vicious animals.

A horse must never be kicked or struck about the head with the hand, reins or any instrument whatever.

At least two hours' exercise daily is necessary to the health and good condition of horses; they should be marched a few miles when cold weather, muddy ground, etc., prevents drill.

Horses' legs will be often hand rubbed, particularly after severe exercise, as this removes enlargements and relieves or prevents stiffness.

In mild weather, the sheath will be washed occasionally with warm water and castile soap, and then greased; in cold weather, when necessary, the sheath should be greased.

Horses used freely in snow and slush, cannot with impunity be placed in a hot stable with littered stalls.

The greatest pains will be taken in the fitting of the saddles; sore backs are generally occasioned by neglect, and the men must never be allowed to lounge or sit unevenly in their saddles.

Sick Horses.

590. In the absence of a veterinary surgeon, the horses on sick report are under charge of the stable sergeant, who reports daily to the captain for instructions as to their treatment.

In treating sick horses, it is to be observed that very little medicine is ordinarily required, and that unnecessary doses do a great deal of harm.

If a horse sustain an injury, neglect his feed, refuse his water, or give any evidence of illness, it will be at once reported.

No horse on sick report will be taken from the stable or picket line for exercise or work, without permission from proper authority.

If there be at any time a suspicious discharge from one or both nostrils of an animal, it must be immediately reported.

To prevent contagion to man or beast, an animal who shows any decided symptom of glanders is to be isolated at once and confined or tied up in some locality where no other animal can approach him.

A glandered horse should be killed as soon as possible. The stall in which he stood is torn down and all the wood work burned, and the iron work disinfected, or otherwise it is closed, and must remain empty until the rack, manger, and every part of the iron and wood work, as also the vessels used in watering and feeding, and his saddle and bit, have been three or four times thoroughly washed with a five per cent. solution of carbolic acid or a one to 1000 solution of corrosive sublimate; all parts to which it has been applied, should be thoroughly scrubbed with hot water to remove all traces of the poisonous salt. The application of a lime-wash to all the stalls, after complete disinfection, will be desirable. Small articles such as bits, etc., can be disinfected by keeping them immersed for a half hour in boiling water. All articles of little value that have been used with a glandered horse, such as halters, bridles, horse-cloths, saddle-cloths,

blankets, nose-bags, curry-combs, brushes, etc., should be destroyed.

Stables occupied by infected or suspected horses should be disinfected daily by washing exposed surfaces with a five per cent. solution of carbolic acid, and nose-bags, halters, buckets used for drinking water, etc., should be carefully washed with the same solution or with boiling water.

General Directions for Shoeing Horses.

591. In preparing the horse's foot for the shoe do not touch the frog, sole, or bars with the knife. In removing surplus growth of that part of the foot which is the *seat of the shoe*, use the cutting pincers and rasp, but not the knife. The shoeing knife may be used if necessary in fitting the toe clip. *Opening the heels* or making a cut into the angle of the wall at the heel must not be allowed. The rasp may be used upon this part of the foot when necessary and the same applies to the pegs. No cutting with a knife is permitted, the rasp alone being used, when necessary. *Flat footed horses* should be treated as the necessity of each case may require. In *forging the shoe to fit the foot*, be careful that the shoe is fitted to and follows the circumference of the foot clear around to the heels; the heels of the shoe should not be extended back straight and outside of the walls at the heels of the horse's foot, as is frequently done. Care must be used that the shoe is not fitted too small, the outer surface of the walls being then rasped down to make the foot short to suit the shoe, as often happens. Heat may be used in preparing and shaping the shoe, but the hot shoe must never be applied to the horse's foot under any circumstances. Make the upper or foot surface of the shoe perfectly flat, so as to give a level bearing. A shoe with a concave ground surface should be used.

592. Habitually in garrison, at the discretion of the Colonel or commanding officer, the horses will be left unshod. Shoes will be fitted and kept ready to be put on the horses.

Hygiene of Stables.

593. Foul air and dampness are the cause of many diseases of the horse; hence the importance and economy of spacious, clean, dry and well ventilated stables. Ceilings should be twelve or fifteen feet high, with large ventilators through the roof, and a window or side aperture in each stall, which should be placed well above the horses' eyes. If possible, the building should have no upper story or loft.

Double stalls should not be less than four feet six inches by nine feet to each horse, and not less than 1200 cubic feet should be allowed to each horse in the stable.

In stables with a loft, ventilation from the top is always insufficient, and there must be side openings well above the horses, so that the draught will pass over their heads. These openings must never be closed except on the windward side, to keep out the rain or snow.

If the stable is partitioned off into single stalls, each stall should be five feet in width to permit the horse to lie down without difficulty.

A picket line is established in the immediate vicinity of each troop stable, the horses being tied to a hemp or wire rope or chain passed through the picket posts. There should be shallow trenches behind the horses to carry off rain, the ground on which they stand having just slope enough to let water run into the trenches, or there may be a single drain in the center along the line of the picket posts. Constant attention must be paid to maintaining the ground about the picket line in good order.

General Rules for Stable Management.

594. The following general rules are recommended:

The stable sergeant takes immediate charge of the police and sanitary condition of the stable, picket line, etc., and is the custodian of the forage and stable property generally.

The stable is to be kept thoroughly policed, free from smells and well lime-washed, but care must be taken that no portion of the stalls which the horse can reach be washed, as the lime will take off the hair and produce unsightly scars. There must be no accumulation of manure or foul litter inside, or near the doors or windows without. The feed boxes are washed from time to time, and kept clean. The ground about the picket line is swept daily, and all dung, etc., carried to the manure heap.

Except at night, when the horses are bedded down, no manure or urine is to remain in the stalls; the stable police remove it as it accumulates.

If practicable, all wood work within reach of the horses and not protected with sheet-iron or other metal should be painted with thin gas tar to prevent its being gnawed. The same precaution may be followed with regard to troughs, picket posts, and picket line. It should be thoroughly dried before putting horses near it.

Smoking in stables, or in their immediate vicinity, is prohibited.

One or more lamps will be hung in each stable to burn during the night.

The horses are stalled according to their positions in the squads, their places at the picket line will be in accordance with the same rule.

The name of each horse and that of his rider are placed over his stall.

Clay is the best for earthen floors, as it packs well. Gravel, or sandy earth, is not suitable.

The sloping of the floor of stalls from the manger to the heel post is injurious and uncomfortable for the animal, which stands in an unnatural position, with the fore legs higher than the hind ones. When the earthen floors are level, the horse will paw a hollow for his fore feet unless he can elevate his hindquarters by backing out of the stall.

Whenever horses go out of the stable, the windows of their stalls are to be kept open, unless necessary to exclude rain or snow or when cold draughts affect the animals in contiguous or opposite stalls.

Stable doors are never closed in the daytime, except to keep out wet or to exclude cold winds which blow on the horses. If the doors be in a single piece, bars are put across the doorway; if divided in half, it will be usually sufficient to open the upper part. At night, the entrance to the stables should be secured in such manner as will prevent the escape of animals.

When circumstances permit horses should be turned loose in a paddock during the daytime or herded under charge of a guard. When this is impracticable they should except in very cold, windy weather, or in very hot weather where there is no shade, stand most of the day at the picket line, as they have better air and are less confined, while the stables become drier and more healthful.

In ordinary climates, cavalry stables must be kept as cool as possible. If the horses do not stand directly in the draught, the colder the stable the less will they suffer if called suddenly to take the field. For the same reason, horses should never be blanketed in the stable, except during very cold weather in high latitudes.

* * * * *

Stable Duty.

* * * * *

Route Marches.

* * * * *

SCHOOL OF THE TROOP.

616. The management of the troop, and its effectiveness, are dependent upon the grouping of the men into squads, under the leadership and immediate control of the non-commissioned officers who are held responsible for the discipline and order in camp and quarters, and are trained as leaders of groups for battle.

The objects of the School of the Troop are to confirm the troopers in the previous drills, to prepare the troop to act independently and to take part in the drills and maneuvers of the squadron.

617. When troops are small, two or more may occasionally be united for drill. The troop thus formed is drilled by one of the captains. The lieutenants command the platoons and the sergeants and corporals are posted according to rank. One object of thus uniting troops is to give officers experience in handling a troop of nearly the legal maximum, or war strength.

618. Movements are first taught at the walk, that the mechanism of the movements may be thoroughly understood; habitually thereafter the movements will be at the trot. They will not be ordered so as to succeed each other too rapidly; that is, one movement must be completed before another is ordered.

619. Mounted drills will be frequently conducted without saddles or blankets, also with the saddles packed.

620. The captain may require the chiefs of platoons to repeat such commands as are to be immediately executed by their platoons. In successive movements, each chief will be particular to give his commands at the proper time and place.

621. During the execution of a successive movement, the captain may reduce the gait or command *halt*, at any time; only those units of formation which have completed the movement reduce the gait or halt; the others execute the movement at the original gait. During instruction, for the purpose of correcting errors, the instructor may command: 1. *In place*, 2. *HALT*; all the officers, file-closers and troopers halt at once and remain in place.

To resume the movement, the instructor commands: 1. *Troop*, 2. *MARCH*, and the movement is then completed.

622. The captain is held responsible for the theoretical and practical instruction of his officers and non-commissioned officers. He requires them to study and recite these regulations so that they can explain thoroughly every movement before it is put into execution.

Sergeants should be capable of drilling the platoons; the lieutenants will frequently drill the troop under the superintendence of the captain.

Formation of the Troop.

623. The troop is formed in single rank and is divided into two, three or four platoons, according to its strength; the division is so made that the platoons may be of nearly equal strength. Habitually the platoons should consist of not less than four nor more than six sets of fours.

When the rank is composed of less than twenty-four troopers the division into platoons may be omitted.

In whatever direction the troop faces, the platoons are designated from the right when in line, and from the head when in column, *first platoon*, *second platoon*, and so on.

624. When the platoon is composed of four or more sets of fours, it is divided into two squads of nearly equal strength, the division falling between sets of fours. A non-commissioned officer is assigned as the leader of each squad and placed as No. 1 of its right four. Non-commissioned officers and experienced privates are assigned as No. 1 of the other fours; in the absence of the assigned squad leader, one of these is designated to take his place.

The squads while in the rank with the troop, are designated as *right squad first platoon*, *left squad first platoon*, etc.; when in extended order or detached, each squad is designated by the name of the non-commissioned officer in command for the time being; e. g. *Sergeant* (or *corporal*) —'s *squad*.

625. The captain may require the troop to be formed so that men of the same squad as provided in Par. 259, A. R., 1889, shall be in consecutive order; this arrangement into squads may be made according to size, so that when the troop is formed the tallest men may be in the center and the shortest on the flanks.

Posts of Officers, Non-Commissioned Officers and Trumpeters in Line.

626. The *captain* is six yards in front of the center of the troop. As instructor he goes wherever his presence is necessary.

When the troop is divided into two platoons, the *first lieutenant* commands, and is two yards in front of the center of the first platoon; the *second lieutenant* commands, and is two yards in front of the center of the second platoon.

The *first sergeant* is two yards in the rear of the second four from the right; the *second sergeant* is two yards in rear of the second four from the left. They are called respectively the *right* and *left principal guides*; in addition to their duties as principal guides, they are charged with the duties of file closers.

When the troop is divided into three or more platoons, the center platoons, in the absence of officers, are commanded by the senior sergeants, in the order of rank; when there are three platoons, the chief of the center platoon is two yards in front of the right or the left four of his platoon. When there are four platoons, the chiefs of platoons are two yards in front of the centers of their platoons.

One sergeant carries the guidon* and is posted on the right of the troop; he is not counted in the rank.

Absent officers and non-commissioned officers are generally replaced by the next in rank or grade.

When the trumpeters are not united in the squadron, one trumpeter accompanies the captain and is one yard to the left and one yard to the rear of the captain's horse.

The other trumpeter is in the line of file closers in rear of the second four, to the left of the right principal guide.

To Form the Troop.

627. In case of alarm or surprise, "*to horse*" is sounded. The men then saddle, pack, bridle and mount with the utmost celerity, and repair to the place of assembly, which is always previously designated.

Except in case of an alarm, the signal "*Boots and saddles*," precedes all mounted formations and is followed after an interval of five minutes, by the assembly.

At the sounding of the "*assembly*," the first sergeant takes his position in front of where the center of the troop is to be formed and facing it, and commands: **FALL IN.**

The guidon places himself facing to the front where the right of the troop is to rest and at such a point that the center of the troop shall be six yards from and opposite the first sergeant; the men fall in as in Par. 137, on the left of the guidon; the other sergeants assist in the formation and take their posts.

The first sergeant brings the troop to the right shoulder, he himself taking that position, and calls the roll; each man answers

** Position of Carry Guidon (Dismounted).*

The lance of the guidon is held vertically in the right hand, the thumb in front on the lance, the fore-finger along the side, the butt about six inches from the ground. It is thus carried in marching.

When leading the horse, the lance is held in a corresponding position in the left hand.

Position of Order Guidon.

The butt of the lance rests on the ground, one inch to the right of the right toe; the right hand grasps the lance in the same manner as when at a carry.

Parade rest is executed as with the carbine, except that the forearms are nearly horizontal. At the command *attention*, resume the order.

At stand to horse, the butt of the lance rests on the ground one inch to the left of the left toe; the lance is held vertically with the left hand at the height of the neck, elbow and forearm closed against the lance.

At the command *prepare to mount*, raise the butt of the lance slightly from the ground while stepping back; upon halting, place the butt on the ground about one foot in front of the left foot of the horse.

After mounting, pass the lance with right hand under the left, which lets go of it without quitting the reins; raise the lance over the horse's neck between the reins and body, then lower and place the butt in the socket; the right hand then grasps the lance at the height of the neck, the arm through the sling. This is the position of carry guidon, mounted.

"*Here*," and comes to the order as his name is answered. The first sergeant marches the troop, habitually in column of fours, to the stables, causes the men to saddle, bridle and prepare to lead out.

628. At the signal "*To horse*," the first sergeant commands: LEAD OUT. The troopers lead out; the guidon, habitually mounted, takes post where the right of the rank is to rest, and faces in the direction in which it is to face; the troopers form on the left of the guidon at stand to horse, in single rank and with intervals of eighteen inches between the horses; non-commissioned officers as far as practicable, take their places at once, otherwise they take post in rear of and near their places in line.

The first sergeant mounted, commands: CALL OFF.

At this command, the troopers count consecutive numbers from right to left commencing on the right of the rank. The first sergeant then divides the troop into platoons and squads, causes the non-commissioned officers to take their posts, and commands: 1. *Platoons*, 2. *COUNT FOURS*. If there be but one trooper in the left four of a platoon, he is ordered into the line of file closers, or assigned to an incomplete four in another platoon; if it consist of two or three troopers, it may work as if a complete four; or that number may be assigned to incomplete fours in other platoons or may be ordered into the line of file closers.

The first sergeant, six yards in front of the center of the troop turns about so as to face toward the captain, salutes with the right hand, reports the result of the roll call, and then without command takes his post, habitually at a trot or canter.

The chiefs of platoons as soon as the first sergeant reports, take posts ten yards in front of and facing their platoons, and draw their sabers.

The captain takes post twelve yards in front of and facing the center of the troop, he returns the salute of the first sergeant, draws saber, and commands: 1. *PREPARE TO MOUNT*, 2. *MOUNT*, 3. *Form*, 4. *RANK*.

At the command *rank*, the chiefs of platoons move forward, turn to the left about and take their posts.

629. If the formal roll call is to be omitted, the troop, dismounted, may be assembled in column of fours; the first sergeant posts the guidon in or indicates the direction the column is to face; at the assembly the first sergeant commands: 1. *In column of fours*, 2. *FALL IN*.

The men form in column of fours, the leading four abreast of the guidon and between him and the first sergeant.

To Form the Troop for Dismounted Service.

630. The men fall in, the roll is called, the troop is formed and turned over, and the officers and non-commissioned officers take posts as at mounted formations, except that the first sergeant salutes with the carbine salute and takes his post at quick time; the sergeants, who in mounted formations have places in the rank, take posts as file closers between the first and second sergeants, and both trumpeters take post in the line of file closers.

Whenever the troop falls in without arms, the men form as when under arms.

Movements by the troop dismounted are executed as explained in the School of the Troop, conformably to the principles prescribed in the School of the Soldier.

Alignments.

631. The captain places himself on the flank of the troop towards which he wishes to align the troop, three yards from the point of rest facing to the left or right according as the alignment is to be made to the right or left, and commands: GUIDES OUT.

At this command, the guidon moves quickly and takes post at the point of rest, facing to the front; the principal guide on the flank opposite the point of rest moves quickly and takes post, a little more than the front of the troop from the guidon, on a line with the captain and guidon, facing to the front; their positions are verified by the captain.

632. The alignments by trooper and troop are executed as explained in the School of the Trooper, Par. 425. The guidon and principal guide may first be established as in Par. 631. In the alignments by trooper, each chief of platoon moves up when the first trooper of his platoon moves out.

The captain may direct the chiefs of platoons on moving up, to face their platoons; each chief of platoon faces to the front when the last man of his platoon has arrived on the line.

The captains, chiefs of platoons and file closers observe requirements of Par. 428.

633. At the command *front*, the captain and the principal guide take their posts. *This rule is general.*

Being in Line, or Column of Platoons, to Dismount.

634. The captain causes the troop to dismount; at the command *prepare to dismount*, the chiefs of platoons move forward, turn to the left about and halt, so as to be about ten yards in front of their platoons. *This rule is general.*

Being in Column of Fours, or Twos, to Dismount.

635. Being at a halt, or marching, the captain commands: 1. PREPARE TO DISMOUNT, 2. DISMOUNT. Executed as in Par. 462.

The chiefs of platoons and file closers turn outward from the column.

To Rest, and to Resume the Attention.

636. The troop is rested and called to attention as in Pars. 315 and 316. After dismounting the command *rest* or *stand at ease* may be given either before or after forming rank; the chiefs of platoons dismount and when at rest may leave their places.

637. The troop executes the movements laid down in the Preparatory Lessons for the School of the Troop on the principles therein explained, unless otherwise provided in this school, substituting *troop* for *squad* in the commands.

The same movements are applicable to *platoons, detachments, details*, etc., substituting their designation for *squad* in the commands.

The Firings.

638. In the different firings, at the first command, the captain and chiefs of platoons take corresponding positions in rear of the line. After the command, *Cease firing*, the command *Posts* is given, when the captain and chiefs of platoons return to their posts.

*To Dismiss the Troop.**

639. The captain causes the troop to dismount and form rank, and directs the first sergeant: *Dismiss the troop*; the officers return sabers and retire; the first sergeant salutes and the troop is dismissed as in Par. 317.

To March in Line.

640. In marching in line, Par. 432, if the guide be right or left, the guidon takes post by the side of the guide on the flank indicated; if the guide be center, the guidon takes post two yards in rear of the guide. He assists in regulating the march of the guide.

In the direct march in line, or in column of platoons, the guidon by his position indicates the direction of the guide. When the guide is changed by command, the guidon changes accordingly.

According as the guide is right, left or center, the chief of the right, left or center platoon is responsible for the gait; the guide preserves the distance of two yards in his rear.

To halt the troop the captain commands: 1. *Troop*, 2. *HALT*.

* NOTE.—Par. 30, for 1. *Break ranks*, 2. *MARCH*, substitute *FALL OUT*. Par. 36, for 1. *Dismiss*, 2. *MARCH*, substitute *DISMISSED*. Par. 317, for 2. *Break rank*, 3. *MARCH*, substitute *FALL OUT*.

To Pass Obstacles.

641. The captain breaks the troop into column of fours; or, if the obstacle covers only one platoon, the chief of that platoon breaks it into column of fours to the front on the most convenient flank; as soon as the obstacle is passed, he reforms line.

Turnings.

642. 1. *Troop right (or left)*, 2. MARCH, is executed as in Paragraph 436.

The chiefs of platoons move by the shortest lines to their new positions; the guidon takes post abreast of the pivot trooper; each file closer follows the trooper in front of him; the captain verifies the alignment from the pivot flank.

643. 1. *Right (or left) turn*, 2. MARCH, is executed as in Paragraph 437.

The guidon does not change position during the execution of the movement. The chiefs of platoons and file closers conform to Par. 642.

Movements by Fours, Twos and Troopers.

644. Being in line, to march in column of fours, the captain commands: 1. *Fours right (or left)*, 2. MARCH, executed as in Par. 438; or, 1. *Right (or left) forward*, 2. *Fours right (or left)*, 3. MARCH, executed as in Par. 444.

Each chief of platoon takes post on the left of the leading four of his platoon.

In column of fours, twos or troopers, the captain marches opposite the center, on the side of the chiefs of platoons and six yards from the flank of the column.

The guide is always without indication on the side towards the chiefs of platoons. The chief of platoon at the head of the column regulates the march of the leading guide.

The guidon marches abreast of the leading four, two or trooper, on the side opposite the chiefs of platoons.

The principal guides march abreast of the second and rear fours, twos or troopers; the other file closers, if there be any, march abreast of the nearest fours, twos or troopers; all on the side opposite the chiefs of platoons.

645. Being in column of fours, twos or troopers, to change the guide, or the chiefs of platoons to the opposite flank, the captain commands: 1. *Chiefs of platoons, on the right (or left) flank*, 2. MARCH.

At this command, the chief of the leading platoon, guidon and leading principal guide pass by the head of the column to their new

positions on the opposite flank; the other chiefs of platoons turn to the left about, the other file closers turn to the right about, change to the opposite flank and hasten to their posts.

The captain passes by the head or rear of the column.

In changing to the opposite flank of the column, the chiefs of platoons pass between the column and the file closers.

646. In wheeling about in column of fours, twos or troopers, the captain turns about and gains the space necessary for his interval from the column; the chiefs of platoons and guidon turn about and hasten to their posts; the file closers turn about individually and take their places abreast of their fours. All turn in the same direction as the fours wheel.

647. In wheeling about in line, the captain and chiefs of platoons pass around the flanks; or when necessary may pass between the fours. The guidon takes his place on the nearest flank or in rear of the center according as he was on the flank or center before the about, or as may be directed by the captain; the file closers pass around the flanks.

648. When the column is wheeled into line toward the side of the file closers, each chief of platoon may pass between his leading four and the rear four of the preceding platoon; the trooper on the marching flank of the leading four slackens his gait to allow the chief of platoon to precede him; when necessary the chiefs of platoons pass around the flanks; the captain and the file closers pass around the flanks; if the line be halted, the guidon takes post on the marching flank of the leading four, unless otherwise directed by the captain.

649. When the column is formed on right (or left) into line toward the side of the chief of platoon, each file closer follows the four nearest him, passing in front of the next following four; the guidon takes post abreast of the leading four on the flank at the point of rest.

650. When the column is formed front into line toward the side of the file closers, each chief of platoon passes in front of his leading four, after the rear four of the preceding platoon ceases to oblique and begins to move forward; the file closers pass around the flanks or between the fours; the guidon takes post abreast of the leading four on the flank nearest the point of rest.

651. The captain in forming line from column of fours goes to his position by the shortest line without passing between the fours.

Being in Line, to Form Column of Platoons to the Right or Left.

652. The captain commands: 1. *Platoons right (or left)*, 2. **MARCH**. Executed by each platoon as in Par. 436.

Chiefs of platoons move by the shortest line to their posts in front of their platoons.

The guidon takes post abreast of the pivot trooper of the leading platoon. The position of the guidon in column of platoons is abreast of the leading platoon, on the side of the guide, or side toward which the column is dressed.

The position of the captain in column of platoons is abreast of the center and six yards from the flank of the column on the side of the guide, or toward which the column is dressed.

653. Each chief of platoon as soon as his platoon is dressed, commands: *FRONT*, and takes his post, if not already there. *This rule is general for dressing a platoon column.*

Being in Line, to March by the Flank in Column of Platoons.

654. The captain commands: 1. *Platoons right (or left) turn*, 2. *MARCH*, 3. *Guide (right or left)*.

Executed by each platoon as in Par. 437.

The chief of the leading platoon is responsible for the uniformity of the gait; the guide of that platoon maintains the distance of two yards from the chief of platoon and is responsible for the direction. The guidon marches by the side of the leading guide and assists in regulating his march. The guides of the platoons following the first preserve the trace of the one next in front and preserve platoon distance.

655. The trace and distance, when lost, are gradually recovered. The trace is recovered by inclining slightly to the right or left. Distances are recovered by a slight increase or decrease of gait. *These rules are general.*

Being in Line, to Break by the Right or Left of Platoons to the Front into Column

656. The captain commands: 1. *Left (or right) of platoons*, 2. *Front into column*, 3. *MARCH*.

At the second command, the chiefs of platoons turning to the left and halting, command: *Left forward, fours left*, and repeat the command *march*; at the command *march*, each platoon executes *left forward, fours left*; as the rear four of each platoon wheels to the front, its chief commands: 1. *Fours right*, 2. *MARCH*, 3. *Platoon*, 4. *HALT*, 5. *Right*, 6. *DRESS*, 7. *FRONT*. The command *march* is given as the rear four completes its wheel and the command *halt*, as the fours unite in line.

The captain and guidon take post on the right flank.

Being in Line, to Break by the Right or Left of Platoons to the Rear into Column.

657. The captain commands: 1. *Right (or left) of platoons*, 2. *Rear into column*, 3. MARCH.

At the second command, the chiefs of platoons turning to the right and halting, command: 1. *Fours right*, 2. *Column right*, and repeat the command *march*; each platoon executes *fours right* and changes direction to the right; each chief of platoon moves forward, turns to the right and halts so as to be on a line with the rank when formed, and allows his platoon to march past him; as the rear four of each platoon wheels to the rear, its chief commands: 1. *Fours left*, 2. MARCH, 3. *Platoon*, 4. HALT, 5. *Left*, 6. DRESS, 7. FRONT.

The command *march* is given as the rear four completes its wheel, and the command *halt* as the fours unite in line.

The captain and guidon take post on the left flank.

Being in Line, to March in Column of Platoons to the Front.

658. Being at a halt, the captain commands: 1. *Right (or left) by platoons*, 2. MARCH, 3. *Guide left (or right)*.

At the first command, the chief of the right platoon commands: *Forward*; the other chiefs, *Right half-turn*; at the command *march*, repeated by all the chiefs, the right platoon moves forward, its chief repeating the command for the guide; the other platoons make a right half-turn, the pivot trooper in each platoon reining in slightly until uncovered by the platoon on his right; each chief of platoon, on the completion of the half-turn, commands *guide left*, and the platoon marches in the new direction until the left guide arrives near the trace of the leading platoon, when he commands: 1. *Left half-turn*, 2. MARCH. The command *march* is given when the guide arrives one yard from the trace of the guide of the leading platoon.

If executed on the march the chief of the leading platoon commands, *Guide left*, as soon as disengaged, and the movement is executed as from a halt. If executed at an increased gait, all the platoons take the gait ordered at the command *march*.

To Put the Column of Platoons in March.

659. The captain commands: 1. *Forward*, 2. *Guide (right or left)*, 3. MARCH.

Being in Column of Platoons, to Oblique.

660. The captain commands: 1. *Right (or left) oblique*, 2. MARCH.

In obliquing in column of sub-divisions, the sub divisions preserve their parallelism to their original front; if the sub-divisions are

unequal in size and the oblique is made towards the side opposite the guide, the guides during the oblique, maintain the same relative position they had at the instant of commencing the oblique.

To resume the direct march, the captain commands: 1. *Forward*, 2. *MARCH*.

Being in Column of Platoons, to Change Direction.

661. Being in march, the captain commands: 1. *Column right (or left)*, 2. *MARCH*.

At the first command, the chief of the leading platoon commands: *Right turn*; at the command *march*, repeated by the chief, the leading platoon turns to the right.

The other platoons march squarely up to where the leading platoon turned, and at the commands of their chiefs turn to the right.

As, in turning, the dress is always toward the pivot without command, each chief upon the completion of the turn, cautions his subdivision *guide right (or left)*, according as the guide was right or left before the turn.

Column half-right or half-left, is similarly executed; each chief gives the preparatory commands: *Right (or left) half-turn*.

To put the column in march and to change direction at the same time, the captain commands: 1. *Forward*, 2. *Guide right (or left)*, 3. *Column right (or left)* 4. *MARCH*.

To Face the Column of Platoons to the Rear and Halt.

662. The captain commands: 1. *Fours right (or left) about*, 2. *MARCH*, 3. *Troop*, 4. *HALT*.

The command *halt*, is given as the fours unite in line; the guidon turns about individually and moves up abreast of the leading platoon, on the nearest flank; the troopers dress to that flank and cast their eyes to the front without command. Should the platoons be unequal in size, the guides regain the trace and distance when put in march.

To March the Column of Platoons to the Rear.

663. The captain commands: 1. *Fours right (or left) about*, 2. *MARCH*, 3. *Guide left (or right)*.

Being in Column of Platoons, to Form Line to the Right or Left.

664. *To form line and halt*, the captain commands: 1. *Platoons right (or left)*, 2. *MARCH*, 3. *FRONT*.

The guidon takes post on the pivot flank of the rear platoon.

Before forming line, the captain, if necessary, may cause the guides to cover at the proper distance; this is usually done by put-

ting the column in march and ordering the guide on the flank toward which the line is to be formed.

665. *To form line and advance*, the captain commands: 1. *Platoons right (or left), turn*, 2. MARCH, 3. *Guide right, (left or center)*.

Line may be formed by first forming column of fours to the front and then forming line.

Being in Column of Platoons to Form Front into Line.

666. Being at a halt, the captain commands: 1. *Right (or left) front into line*, 2. MARCH, 3. FRONT.

At the first command, the chief of the first platoon commands: 1. *Forward*, 2. *Guide left*; the other chiefs command: *Right half-turn*.

At the command *march*, repeated by the chiefs, the first platoon advances thirty yards when its chief commands: 1. *Platoon*, 2. HALT, 3. *Left*, 4. DRESS; the other platoons execute *right half-turn*; on the completion of the half-turn, each chief commands: *Guide left*. When the left guide, marching in the new direction, arrives one yard from the point opposite his place, the chief commands: 1. *Left half-turn*, 2. MARCH, 3. *Guide left*. Each chief halts his platoon just short of the line, and commands: 1. *Left*, 2. DRESS.

If marching at a walk, the chief of the first platoon commands: *Guide left*.

If marching at a walk, and the command be *trot*, the captain commands: *Guide left*, immediately after the command *march*. The chief of the first platoon cautions, *continue the march*, and repeats the command for the guide; the chiefs of the other platoons repeat the command *trot*, each commanding: 1. *Walk*, 2. MARCH, on arriving abreast of the leading platoon.

If marching at a trot, the movement is executed in the same manner, the chief of the first platoon commands: *Walk*, at the first command of the captain; he repeats the command *march*, and also the command for the guide.

If marching at a gallop, or at a trot and the command be *gallop*, the same principles apply, the first platoon moves at a trot; the chiefs of the other platoons command: 1. *Trot*, 2. MARCH, when abreast of the leading platoon.

If the troop be halted during the movement, only those platoons halt which have arrived abreast of the leading platoon; the others complete the movement, each being halted by its chief upon arriving in line.

Being in Column of Platoons, to Form on Right or Left into Line.

667. The captain commands: 1. *On right (or left) into line*, 2. MARCH, 3. FRONT.

At the first command, the chief of the first platoon commands: 1. *Right turn*; at the command *march*, repeated by its chief, the first platoon turns to the right; when the platoon has advanced thirty yards the chief halts it, and commands: 1. *Right*, 2. DRESS.

Each of the other platoons marches platoon distance beyond the point where the platoon preceding began the turn, when by command of its chief, it turns to the right; the chief halts it near the line and then commands: 1. *Right*, 2. DRESS.

If executed from a halt, at the first command, the chiefs of the platoons following the first, command: 1. *Forward*, 2. *Guide right*, and repeat the command *march*.

In forming on right or left into line at a trot or gallop, the same principles apply as in forming line to the front, Par. 666; the leading platoon continues the march in the new direction at a walk or trot.

Being in Line, to Advance in Line of Platoons in Column of Fours.

668. The captain commands: 1. *Platoons*, 2. *Right (or left) forward*, 3. *Fours right (or left)*, 4. MARCH, 5. *Guide (right, left or center)*.

The captain takes post as in line. The guidon takes post as in column of fours by the platoon of direction. If the guide be center, the center, or right center platoon is the platoon of direction.

The interval between platoons is four yards less than platoon front.

Being in Column of Fours, to Form Line of Platoons in Column of Fours.

669. *To the front.* Being at a halt, or marching at the walk, the captain commands: 1. *Right front into line of platoons in column of fours*, 2. MARCH.

The chief of the first platoon marches his platoon thirty yards to the front and halts it; each of the other platoons is marched by its chief by the shortest line until by a change of direction it will be platoon distance in rear of and opposite its place in line. Each chief halts his platoon when abreast of the leading platoon.

The principles laid down in Par. 666, govern in this formation.

Being in Column of Fours, to Form on Right or Left into Line of Platoons in Column of Fours.

670. Being at a halt, or marching at a walk, the captain commands: 1. *On right (or left) into line of platoons in column of fours*, 2. MARCH.

At the command *march*, the chief of the leading platoon causes his platoon to change direction to the right, and halts it after advancing platoon distance and thirty yards in the new direction; each of the other platoons marches forward and beyond the preceding platoon, changes direction to the right when opposite its place and is halted when abreast of the leading platoon.

If marching at a trot or gallop, or the command be *trot* or *gallop*, the leading platoon marches at a walk or trot, the other platoons execute the movement at the trot or gallop and take the walk or trot on arriving abreast of the leading platoon, Par. 666.

Being in Column of Fours, to March in Line of Platoons in Column of Fours to the Right or Left.

671. The captain commands: 1. *Platoons*, 2. *Column right* (or *left*), 3. *MARCH*, 4. *Guide* (*right, left or center*).

Being in Column of Platoons, to March in Line of Platoons in Column of Fours.

672. The captain commands: 1. *Fours right* (or *left*), 2. *MARCH*, 3. *Guide* (*right, left or center*).

Being in Line of Platoons in Column of Fours, to Form Line.

673. The captain commands: 1. *Platoons*, 2. *Right* (or *left*) *front into line*, 3. *MARCH*, 4. *Troop*, 5. *HALT*, 6. *Left* (or *right*), 7. *DRESS*, 8. *FRONT*.

The command *halt*, is given when the leading fours have advanced thirty yards.

If executed at a trot or gallop, the captain, after the command *march*, adds: *Guide left* (*right or center*).

Being in Column of Platoons to Form Column of Fours.

674. The captain commands: 1. *Platoons*, 2. *Right* (or *left*) *forward*, 3. *Fours right* (or *left*), 4. *MARCH*.

The platoons unite in one column of fours.

In breaking the column of platoons into column of fours from the side of the guide, should any platoon be composed of a greater or less number of fours than the one preceding, its gait will be slightly increased or decreased, to enable all the fours to take their proper distance in column.

If the platoons be broken from the side opposite the guide, the column of fours of the leading platoon marches straight to the front; the other platoons, after breaking into column, will, if necessary, slightly change direction so as to follow the preceding platoon.

Being in Column of Fours, to Form Column of Platoons.

675. The captain commands: 1. *Platoons*, 2. *Right* (or *left*) *front into line*, 3. *MARCH*.

Each platoon executes front into line. If executed at a walk, the captain halts the column after advancing thirty yards. If executed at a trot, or gallop, the captain commands: 4. *Guide left* (or *right*).

Being in Line of Platoons in Column of Fours, to Oblique by the Heads of Columns.

676. The captain commands: 1. *Platoons*, 2. *Column half-right* (or *half-left*), 3. *MARCH*.

The right platoon is the platoon of direction; the other platoons march parallel to it; the line of chiefs of platoons should be parallel to the original front.

To resume the march in the original direction, the captain commands: 1. *Platoons*, 2. *Column half-left* (or *half-right*), 3. *MARCH*, 4. *Guide* (*right, left or center*).

Being in Line of Platoons in Column of Fours, to Change Direction to the Right or Left.

677. Being in march, the captain commands: 1. *Change direction to the right* (or *left*), 2. *MARCH*.

At the first command, the chief of the first platoon commands: *Column right*; the other chiefs command: 1. *Column half-right*, 2. *Trot*.

At the command *march*, the first platoon changes direction to the right; the other platoons take the trot, each chief marches his platoon by the shortest line to its place abreast of the first platoon, and commands: 1. *Walk*, 2. *MARCH*.

If marching at the trot, the first platoon marches at the walk; the other platoons continue at the trot. If marching at the gallop, or at the trot and the command be *gallop*, the first platoon marches at the trot, and the others march at the gallop.

If at a halt, the chiefs of platoons give the commands necessary to put their platoons in march.

Order in Echelon.

678. Sub-divisions in echelon are designated from right to left as in line.

The leading sub-division is the sub-division of direction and the guide is always on its outer flank when in line.

Being in Line, to Form in Echelon.

679. Being at a halt, the captain commands: 1. *Form echelon*, 2. *First* (or *fourth*) *platoon*, 3. *Forward*, 4. *MARCH*.

At the command *march*, the designated platoon marches to the front; the second platoon, at the command of its chief, moves to the front when at platoon distance from the first platoon; the other platoons move to the front in succession as explained for the second.

If marching, the designated platoon continues to march to the front; the other platoons halt, or take the next slower gait, until they have platoon distance, when they in succession take up the march at the same gait as the leading platoon.

The position of the captain is the same as when in line.

680. *To halt the echelon*, the captain commands: 1. *Troop*, 2. *HALT*.

To put the echelon in march, the captain commands: 1. *Forward*, 2. *MARCH*.

681. *To form the echelon of platoons in column of fours*, the captain commands: 1. *Fours right* (or *left*), 2. *MARCH*; or, 1. *Platoons*, 2. *Right* (or *left*) *forward*, *fours right* (or *left*), 3. *MARCH*.

The echelon marching in column of fours to form echelon facing in the same direction, the captain commands: 1. *Platoons*, 2. *Right* (or *left*) *front into line*, 3. *Trot* (or *gallop*), 4. *MARCH*.

682. Being at a halt, to reform the line, the captain commands: 1. *Form line on* (such) *platoon*, 2. *MARCH*, 3. *FRONT*.

The designated platoon stands fast.

At the first command, the chiefs of platoons in front of the designated platoon command: *Fours right* (or *left*) *about*, according as they are to the right or left of the designated platoon; those in rear command: *Forward*; at the command *march* the chiefs of platoons in front of the designated platoon, march their platoons a little in rear of the line of the designated platoon, and command: 1. *Fours right* (or *left*) *about*, 2. *MARCH*, 3. *Platoon*, 4. *HALT*, 5. *Left* (or *right*), 6. *DRESS*.

The chiefs of the rear platoons halt their platoons on the line and command: 1. *Right* (or *left*), 2. *DRESS*.

If executed on the march, the designated platoon is halted by its chief at the command *march* by the captain.

683. Being in echelon, to form oblique line towards the inner flank of the leading platoon, the captain commands: 1. *Platoons*, 2. *Left* (or *right*) *half-turn*, 3. *MARCH*, 4. *Guide center*.

At the command *march*, the platoons execute the *left half-turn*; at the fourth command, given immediately after the command *march*, the center or right-center platoon marches straight to the front; the pivots of the other platoons direct their march so as to close to the center platoon.

684. *Being in column of platoons or in line, to form oblique echelon,* the captain commands: 1. *Platoons*, 2. *Left (or right) half-turn*, 3. *MARCH*.

The guides march so as to cover about one-third of the platoon next in front and to have a distance equal to about one-half the platoon front.

To Inspect the Troop.

685. *Being in line,* the captain commands: 1. *Prepare for inspection*, 2. *MARCH*, 3. *FRONT*.

At the command *march*, the chiefs of platoons take post six yards in front of their platoons; the guidon on the right of the rank; the right principal guide on the right of the guidon; the trumpeters two yards to the right of the right principal guide, on a line with the rank; the other file closers on the left of the rank, the left principal guide to their left. All dress to the right.

The captain verifies the alignment of the chiefs of platoons and the rank, commands *front* and takes post in front of the guidon in line with the chiefs of platoons.

To resume the posts in line, the captain commands: *POSTS*.

At this command, the chiefs of platoons turn to the left about, move forward, and by another left about resume their places; the right principal guide turns to the right about and resumes his post; the trumpeters resume their places, the file closers on the left of the rank successively turn to the left about and resume their places in rear of the rank.

The troop is inspected as in Par. 410.

When the captain dismounts the troop, the guidon dismounts with it, the chiefs of platoons return sabers, dismount and stand to horse facing their platoons. The captain dismounts and his horse is held by his trumpeter. If the arms are not to be inspected, the commands therefor are omitted.

The chiefs of platoons face toward the troop during the inspection and stand at ease, or the captain may require one or both lieutenants to accompany or assist him; if dismounted, their horses are turned over to the trumpeters.

686. Should the inspecting officer be other than the captain, the captain prepares the troop for inspection and awaits the orders of the inspecting officer. Upon the approach of the inspector, the captain salutes him; the inspector returns the salute and informs him of the kind of inspection; the captain turns to the left and gives the necessary commands, faces to the front and when inspected accompanies the inspector. The captain does not return his saber while mounted.

Route Marches.

687. The captain and first lieutenant march at the head of the column; the trumpeters and non-commissioned officers near the head of the column march in rear of the officers and in front of the leading four; the file closers or other non-commissioned officers near the rear of the column march in rear of the rear four; the chief of the rear platoon marches in rear of the column. Non-commissioned officers commanding platoons may march with the file closers.

THE CHARGE.

688. Cavalry must always attack, must always take the initiative and never allow itself to be attacked, the object being to ride the enemy down and complete his overthrow with the saber and pistol.

The strength of cavalry is in its impetus; but swiftness alone does not assure success; order, uniformity and the proper employment of reserves are equally essential.

No precise formation can be laid down for cavalry in the attack, much depends upon the ground, and the character of the enemy and his dispositions, but as a rule it should be made in line.

Cavalry cannot effectively preserve formation in charging *down hill* if the incline be greater than five degrees; it can canter down hill and charge *up hill* and preserve formation, if the incline be not greater than ten degrees.

689. The ground over which a command is to charge should be reconnoitered as thoroughly as possible; ground scouts should always precede the charging force.

The service of ground scouts and combat patrols requires most careful attention, and the men employed on this duty should be selected for their intelligence and daring, and should be fully instructed in their duties. They should reconnoitre the ground to a considerable distance in front of the command, taking care, however, not to get too far ahead to communicate by signals information of value.

When the charge is sounded or commanded, the scouts and combat patrols clear the front of the advancing line and join on the nearest flank.

Owing to the present general use of wire fences, ground scouts in actual service against the enemy should be equipped with wire nippers.

690. The platoons separately, and the troop entire, are instructed in the charge according to the principles explained for the squad.

When the troop entire executes the charge, the captain, or the

troop leader is in front of the center; the center troopers make room for the guidon, who moves up into the interval between them, takes the duty of guide and follows in the trace of the leader.

During the instruction, when the captain does not personally conduct the charge, he goes wherever he can best observe the errors, and corrects them.

The enemy is outlined, Par. 470, by a non-commissioned officer and two or three men at a distance of 1,000 to 2,000 yards, who are so placed as to represent a platoon of the enemy. The platoon is directed against the outlined enemy; when at 800 to 1,200 yards from it, the chief of platoon commands: 1. *Gallop*, 2. *MARCH*; the chief of platoon directs his march against the enemy's flank or center as he may have been directed. The center trooper follows directly in the trace of the leader.

The outlined enemy approaches the platoon and conforms to its gaits, preserving the skeleton formation of a platoon. When the platoon charges, the troopers outlining the enemy turn left about, individually, and retire at full speed.

691. The further conduct of the troop or platoon is governed by Par. 471. If the *pursuit* be intended, the signal *charge* is sounded; to *halt the pursuit the recall* is sounded; if *retire* be intended, *face to the rear* is sounded; if *break rank in the mêlée*, the signal *skirmishers* is sounded; at this, the troopers disperse, as in confusion, but remain in the immediate vicinity riding around each other at the walk, crossing sabers, cutting against infantry, etc. To stop the *mêlée* the rally is sounded.

To stop the progress of the charge at any moment the instructor sounds the *recall* and *halt*; he then explains the faults and how to correct them.

692. The charge as foragers is conducted upon the same principles. The troop or platoon rallies and assembles as in Paragraphs 500 and 501.

While in extended order as foragers, the troop or platoon may be marched by the flank and to the rear by the same commands and means as when deployed as skirmishers.

The Troop Acting Alone.

693. As a rule when the troop is acting alone in charging the enemy, it is divided into two or three parts, viz: into the *attacking line* and *support*; or *attacking line*, *support* and *reserve*, when the troop is of nearly full strength.

If the attacking line, support or reserve consist of only one platoon it is led by its chief; if it consist of two or more platoons it is led by the senior chief of platoon, or by the captain.

694. When a chief of platoon takes post as leader of two or more platoons, the principal guide on the nearest flank takes his place as chief of that platoon. The other principal guide goes with the support. The guidon joins the reserve if there be one; if not, the support. Whenever the *rally* or *assembly* is sounded, the guidon goes at once to the position of the captain, or to the rallying or assembling point as indicated by the captain.

To Charge.

695. The captain designates the attacking line, the support, and if there be one, the reserve.

Marching in line at the trot, when the troops arrive at the place to take the formation for the charge, the captain points out the direction or object of attack and commands: 1. *To the charge*, 2. MARCH; or. 1. *To the charge as foragers*, 2. MARCH.

At the first command, the leader of the attacking line commands: *Gallop* (or *as foragers*); the leader of the support and reserve caution: *trot*.

At the command *march*, the attacking line takes the gallop (or deploys) and charges as in Par. 465 (or 468).

When the support has a distance of about eighty yards from the attacking line it takes the gallop and follows the movements of that line, (unless the leader has been given special orders as to its point of attack, such as to charge the support of artillery, etc.) when it arrives at the proper distance, it charges to support the first line.

The reserve, if there be one, follows the support at a distance not greater than 150 yards, unless otherwise ordered by the captain, and charges when at the proper distance.

The captain may give special instructions to govern the leaders of the support or reserve or both.

696. Marching in column of platoons at the trot, and no support or reserve having been designated, the captain commands: 1. *To the charge*, 2. MARCH; or. 1. *To the charge as foragers*, 2. MARCH.

At the first command, the chief of the first platoon commands: *Gallop* (or *as foragers*) and charges as in Pars. 465 or 468 according to the command of the captain.

The platoons in rear of the first continue at the trot, each taking the gallop, or deploying as foragers when the preceding platoon has a distance of about eighty yards, and each takes the charge over the same ground as the leading platoon.

As each platoon takes the gallop, the guidon joins the next succeeding platoon.

If the charge is made as foragers and the *rally* be commanded or signaled, each platoon that has charged rallies in rear of the column, the guidon taking position at the head of the column; the platoons that have not charged remain in column. If the remainder of the troop has been formed in line, the platoons that have charged rally in their places in line.

Each platoon counts fours as soon as rallied.

697. The charge may be made from column of fours.

Marching at the gallop, the fours successively take the extended gallop when the four next preceding has gained the distance of one horse's length. The fours rally in rear of the column.

The Troop in the Squadron.

698. The troop in the squadron charges on the same principles as when alone, except that it does not have a support or reserve, unless so ordered by the major.

Except when charging from line of platoon columns, the captain puts as much of his troop in the attacking line as possible.

PROFESSIONAL NOTES.

THE JOURNAL.

The popularity of this Journal and the value of its pages to professional readers are evinced in many ways, and in no way more than by the copious extracts that other publications are making from its pages. We would point particularly to the New Drill Regulations which at least three publications have been reprinting. We have observed this with a pride which might have been increased, if these journals had seen fit to give credit for their extracts.

SOUTHERN CAVALRY.

While only a few of the northern States maintain even a single troop of cavalry as a part of their organized militia, the State of Georgia is forging to the front with her horsemen. She has to-day a complete regiment, finely uniformed and fairly mounted, working up its drill and instruction with the object of uniting at a camp in the summer or fall. Some of the troops, like the Georgia Hussars of Savannah, the Liberty Troop and the McIntosh Light Dragoons are old and war-tried commands, while the Governor's Horse Guard of Atlanta and the Macon Hussars are only recently mustered in. Despite their newness, even these last mentioned companies won hearty praise from judges selected from the regular service at the "tilts" held at the autumn fairs, while the horsemanship and saber work of the older troops were beautiful to see.

The most progressive State in the new South is the first to give its militia substantial encouragement. The legislature of Georgia has just provided means for camps and systematic instruction, and at a recent convention of the officers, it was resolved that, despite the love for the old gray, the troops should be uniformed hereafter in the National blue.

Although a single Southern State contains more organized cavalry than a half dozen Northern and Western States combined, it is a fact that there are excellent troops at the North. The Milwaukee Light-Horse Squadron, the Cleveland Troop and the City Troop of Philadelphia are well known. Troop "A" of New York, numbering 103 men, although a comparatively recent organization, has already won commendation by its drill and appearance, and will be heard from again.

It now begins to look as if a really national spirit was being infused into our volunteers. If this be so, the attractions of service as a cavalryman are so many, each duty of the trooper can be made so much of a pleasure and a privilege, that there is every reason why the volunteer cavalry should contain the pick and pride of the country.

MORE ABOUT THE HORSE-ARTILLERY GUN.

A recently published report on the construction of fifty 3.2 inch field limbers, one caisson and one combined battery wagon and forge, at the national armory, Springfield, Mass., contains information of much interest.

Starting with the necessity which arose for these new constructions in consequence of the adoption of the 3.2 inch gun, the report first describes the radical changes introduced into the new harness devised by Colonel WILLISTON—the substitution of the neck-yoke for the pole-yoke, and of the double and single-trees for the splinter-bar. Then follows the description, with details of the new construction.

The bodies of limbers and caissons are made of angle iron, with tubular steel axles and wooden ammunition chests.

The battery wagon and forge constitute one carriage, the fore wheels carrying all that pertains to the forge except the sledge, anvil and vise; these, with all that pertains to the battery-wagon, are carried by the hind wheels. A four-horse carriage, called an "artillery store-wagon, is added to the battery; in this the horses are driven with reins, the driver being provided with a seat on the wagon. "The function of this wagon is to carry ammunition for the small-arms of the battery, spare small-arms not in use, spare intrenching tools, water barrel and the knapsacks of cannoneers." Road brakes are attached to both caissons and battery wagon, and these can be applied or released while the wheels are in motion. From the table of weights given, which was made up from model carriages, equipment, etc., are taken the following:

3.20-inch B. L. rifle.....	829 pounds.
Carriage with brakes, heavy	1,300 "
Carriage with brakes, light	1,166 "
Implements	31 "
Limber with implements.....	1,031 "
Ammunition, including forty-two rounds of shell and shrapnel.....	734 "
Total for heavy carriages.....	3,927 "
Total for light carriages.....	3,793 "
Weight per horse for heavy carriage	654.5 "
Weight per horse for light carriage.....	632 "
Weight of caisson complete with implements and ammunition, including one hundred and twenty six shell and shrapnel.....	4,553 "
Weight of forge and battery wagon with tools, imple- ments, etc., but without stores.....	3,671 "

For horse-artillery, it is proposed to remove the front chest of each caisson body so as to reduce the weight and give space for tor-

age. The weight per horse will then be 607 pounds. These weights are compared with the corresponding weights of the French and German horse artillery as given by Captain R. F. JOHNSON, R. A., as well as with those Captain JOHNSON prescribes as admissible, though not to be exceeded :

	<i>French.</i>	<i>German.</i>	<i>As prescribed by Capt. Johnson.</i>	<i>U. S. 3.2 inch.</i>
Weight per horse, gun team.....	708 lbs.	661 lbs.	746 lbs.	632 lbs.
Weight per horse, caisson team	758 "	792 "	607 "

Commenting on a very interesting account of the services of Battery "D," Second Artillery, which was armed with light twelve pound guns and was attached in 1863 to General BUFORD's cavalry division, the report says:

"This experience with a gun of 645 pounds per horse for gun team and 635 pounds for caisson, without cannoneers and without the extra weight mentioned in the above statement in the actual campaign is more instructive than any amount of even fine theory. The roads traveled over could hardly be worse in this or any country where they are at all practicable for four-wheeled vehicles. In the light of this experience, it can hardly be questioned that the 3.2 inch gun equipment, horse or mounted, has a mobility equal to any demand on it."

REPORT OF THE CHIEF OF ORDNANCE FOR 1889.

The Chief of Ordnance reports that all efforts to obtain a smokeless powder have been abortive in this country, and that American powder makers and chemists have not been awakened to the lucrative opportunity presented to them. The report then says:

"In view of the present status of the powder question it is not deemed expedient to produce a small caliber rifle for compressed powder cartridges. Such a rifle, however excellent in itself, would be inferior to foreign arms using smokeless powders, and, consequently, unsatisfactory to the army and the country at large. It is believed, however, that all the elements entering into the problem except the powder are ready for use the moment this powder is obtained. A .30 caliber rod-bayonet Springfield rifle has been made, and a rod-bayonet .30 caliber magazine arm is now in progress of construction in anticipation of the final acquisition of the much needed powder, so that no time may be lost in presenting for trial both single-loading and magazine small-caliber rifles."

The weekly testing of a number of the current manufacture of rifles, by expert marksmen on the armory rifle ranges, serves to maintain the excellence of the Springfield .45 caliber rifle, with which a team of American riflemen (Massachusetts volunteer militia) has recently won five successive contests abroad with five different teams of English volunteers.

Two of the American team are workmen of the armory and members of the Armory Rifle Club, which performs the aforesaid duty of testing Springfield rifles. The members of this club, all armory workmen, combine, generally, the excellence of skilled mechanics with that of expert marksmen, having few if any superiors. The practice on the ranges the past year has shown no falling off in the excellence of the rifle. On the contrary, for several years there appears to have been a progressive gain in accuracy.

The estimates for the fiscal year, 1890-91, include items for the manufacture of metallic carriages for the horse-artillery gun. Altogether, it is pretty sure that this gun will soon be ready in all respects for service.

ENCOURAGEMENT OF HORSE RACING IN FOREIGN ARMIES.

Horse racing is made obligatory among the officers of the Russian cavalry and horse-artillery. Last year, out of 2264 officers, all but 198 participated in the races, these being excused on account of illness of horse or rider, not being provided with a mount, and thirty were excused on account of the horse not being suitable for hurdle racing.

The prizes were offered by the Russian War Department, and amounted to about \$15,300; the distance was about a mile and a third, and the races were over hurdles.

A single hurdle race and steeple chase, over double the above distance, was made voluntary, and the prizes were offered by the members of the Imperial family.

In Italy, a recent order of the War Department states that horse racing among officers is conducive to bold and daring horsemanship, and that it induces officers to keep good and serviceable mounts. Eight prizes, of about \$285 each, are offered and rules are prescribed for conducting the races; the principal requirements are, that the horses must be those used in military service and that officers must ride their own mounts.—*Militaer Wochenblatt*. C. K.

THE COLONEL.

By General DRAGOMIROV, in his Manual of the Training of Troops for Combat.

The commander of a regiment is a great personage: "He drives, but does not drag the coach." He acts in everything by intermediary; through the battalion commanders and adjutants in matters of personnel and instruction; through the major in questions of accountability and administration; and through the surgeon in matters of hygiene.

He is at the head of the regiment; the father of the family; the most zealous supporter of good fellowship, of love of the trade, of respect for that profession, in which man is called upon to make the supreme sacrifice on the altar of his country.

He weighs everyone by his merits; he intercedes with the higher authority for those of his subordinates who get into trouble, when they are worthy of his care.

His word is the law of the regiment. Hence he can never relieve himself of a responsibility by casting it upon his inferiors, but takes it upon himself, with the reflection that, right or wrong, he is the head, the responsible chief of his regiment.

He takes an especial care of the health of the men confided to his leadership.

In all things he fixes clearly the end, constantly supervises the effort to attain it, and persistently exacts the realization of his ideal.

He sees that all is done well at the proper time; that all duties move together; that is to say, that there is no craze about the more agreeable details at the expense of others less attractive.

If he requires anything new, he should himself show how it is to be done.

His influence is felt in the companies through the intermediaries, the battalion commanders, but he never usurps their rôles; and very much less does he ever take upon himself the functions of the company commanders.

The chiefs of battalion are the immediate auxiliaries of the colonel, to control the punctual performance, in the companies, of duties which he prescribes, and of all the regulations and instructions; if there is anything wrong, it is upon them that his wrath should fall.

In their turn, the battalion commanders hold the company commanders responsible.

To pass over the heads of battalion commanders, in commanding a regiment, is a serious blunder. This fault is born of the fact that in peace it seems possible to do it without inconvenience.

In peace, perhaps it is; but in war, No. And then it is too late to expect from these battalion commanders, the initiative, the sense of responsibility, that we neglect to develop in time of peace.—

Revue du Cercle Militaire.

F. S. F.

RAID OF A DETACHMENT OF CAVALRY.

The maneuvers of the Fourth Corps in the District of Vilna have given the Russian cavalry the opportunity to display, once more, the brilliant qualities that have established its reputation. * *

A detachment was to destroy the railroad station at Baranovitch-Brest and Baranovitch-Polésié, and carried pyroxyline and tools for the purpose. Accompanied by a section of horse-artillery, it comprised in all, six officers and two hundred men, taken from the chasseurs and scouts of the different regiments of the Fourth Cavalry division.

The detachment started August 24th, at 4 p. m., and was to reach its destination not later than noon on the 26th. Leaving Volkorysk,

it arrived at Izabelina (eight miles) in one hour and ten minutes. After a half hour's rest to examine shoes and equipments, it marched again at 5:40 P. M., and reached Menjiriétchié at 7:10. At a mile and a half from the village the detachment dismounted and led, for the purpose of resting the horses, so as to be able, immediately upon arrival, to take them to the stable and unsaddle. The total distance of sixteen miles had been traversed in two hours forty minutes, without counting the half hour's halt.

Starting the next day at 6 A. M., and crossing a ford (seventy-five yards wide with water up to the saddle) the detachment arrived at 9:25 at Pachénitchie, leading for half a mile and halting for an hour and twenty minutes. Resuming the march, it reached Jirovitsky, maneuvering to take the village, which was supposed to be occupied by a large provision-train, escorted by two companies and a platoon of cavalry. This distance (Menjiriétchié to Jirovitsy), thirty-three miles, was traversed in seven hours twenty minutes, from which, taking two hours thirty minutes for the halt and maneuver, we have an average rate of about seven miles per marching hour. At this point a halt was made for three hours forty minutes. The horses were unsaddled, rubbed down and then blanketed, watered and fed oats.

Starting once more at 5 P. M., Lokosvy was reached in three and a half hours; whence, after an hour's halt, the detachment marched over a difficult road through the woods lighting its way by pine torches. On approaching the Brest station, a maneuver was made to take the place and it was occupied a half hour after midnight; that of Polésie was captured by 2 A. M. The party proceeded immediately to the destruction of the road, paying particular attention to the telegraph line, the switches, tanks and round-houses.

Thus the detachment had fulfilled its mission twelve hours before the fixed time. It had made seventy-two miles in twenty hours (Menjiriétchié to Polésie). If we deduct the time of rest and maneuver, the march proper had occupied eleven hours (rate, six and a half miles per hour).

No horse was hurt and there were but one or two accidents to the shoes.

On the 26th at 1:30 P. M., the detachment set out again for Słonim, where it arrived at 1 A. M. on the 27th. So, from the 25th at 6 A. M., to the 27th at 1 A. M. (forty-three hours), it had marched one hundred and nineteen miles, the marching time being eighteen hours.

Great attention had been paid to regulating the gait; in general, the column marched ten minutes at the walk and fifteen minutes at the trot, sometimes this was reversed.

The horses which took part in this operation were far from being choice animals; many were destined for condemnation.—*Revue du Cercle Militaire*.
F. S. F.

RULES FOR UMPIRES AT PEACE MANEUVERS, FROM
GERMAN FIELD SERVICE REGULATIONS.

Translated by Captain G. L. W. GRIERSON, R. A. Proceedings of the Royal Artillery Institution.

The rôle assumed by umpires is meant, as far as possible, to take the place of the results caused by war which are wanting in peace. Their decisions must be accepted in the name of the chief-in-command as law, and officers of higher rank than the umpires must submit to the orders the latter give. At all maneuvers the chief-in-command is equally umpire-in-chief. Umpires must only take into consideration the actual situation, and not what was intended. They must base their decisions on circumstances, which, in like cases in war, would be decisive either of victory or defeat. The umpire-in-chief is alone justified in further interference, in order that, in his capacity as chief-in-command, he may as much as possible keep the progress of the maneuvers in hand.

Umpires are authorized to obtain any information they may require from the commanders of troops, and are in duty bound to see that their decisions are carried out.

They must at once inform the umpire-in-chief of important decisions, during which it is the duty of the commanders of troops to report the same to their senior officers, and communicate with the troops on either flank.

The number of umpires employed must not be insufficient; while decisions are being awaited a large number of umpires will obviate the chance of impossible situations occurring in other parts of the field.

The chief-in-command will appoint the umpires from the total number of senior officers available, and will attach officers of lower rank to them as assistants, according as they are required. The adjutants of senior commands, and regimental adjutants remain with their corps. During the Imperial maneuvers, the umpires will be appointed from the Grand Head-Quarters; and the Chief of the General Staff of the Army will appoint officers of the General Staff as assistants.

When maneuvers are being held against a "marked enemy," umpires can also be employed.

Umpires and officers attached as assistants will wear a white band on the left arm above the elbow.

Before the maneuvers begin, the umpires receive information as to the situation and the orders issued on either side. The chief-in-command will then tell them off to a particular "rayon;" as a rule, the umpires will be distributed either by lines or by wings. According to circumstances, special umpires may be appointed to individual bodies of troops, such as advanced guards, detachments, etc. In the case of cavalry acting independently, it is best to assign to it special umpires. This distribution, however, does not preclude any umpire from giving a decision in place of some other umpire who may not happen to be on the spot at the time, in the "rayon" to which he belongs.

Umpires must always be told off to watch outposts and any night operations.

In that he knows the situation and circumstances attendant thereon, the umpire must endeavor to see ahead of the measures taken, deployments, etc., in order that he may be on the proper spot at the proper time. He must keep himself, personally, with the aid of his assistants, "*au courant*" with the measures taken by either side, and endeavor to see all he can by skilfully selecting his standpoint. According as he thinks fit he will communicate to the commanders his observations on the handling of the troops on either side, in order that there may be no check therein, that the subordinate leaders may act independently, and that situations impossible in war may be avoided, such as columns standing in the open under effective fire, flank marches made in the open, etc.

When, in actual fighting, a decision would be arrived at by arms, the decision of the umpire replaces it. Umpires alone, and not their assistants, are authorized to move in the above-mentioned communications between troops, and to give decisions. Should several umpires meet, then the senior in rank gives the decision. A decision once given can be altered by the umpire-in-chief only.

It must be stated in decisions whether troops are to advance further, whether they must retire, and in which direction, and for what space of time they are to remain unfit to fight. Decisions given concerning artillery must specify whether the guns are able to move, and for what time they are to remain unable to move, should it be so decided.

Troops which are declared unfit to fight must move back from the zone of fighting troops, and must not be employed during the time they are considered unfit to fight, and when they are again employed, it must first of all be in the reserve. In order not to influence their "*morale*," troops are, only in very exceptional cases, to be adjudged unfit to fight for the whole of the remainder of the day. Should an attack have been carried out to "decision giving," then the umpire declares which side is victorious, and appoints for it a time as a "fight pause," necessary for reforming, before it passes on to the pursuit. In cases where troops have become much split up by reason of the ground and "*locale*," the fight must be broken off for a short time, in order that both sides may reform, according as their umpires order.

Shelter trenches and gun epaulments or other cover, the construction of which is not prohibited from a peace point of view, are only to be taken into consideration when they have been actually thrown up in accordance with the regulations.

To judge of the value of shelter trenches, it is necessary to ascertain whether or not a sufficiently free field of fire has been assured.

When it is impossible, from peace considerations, to execute certain tasks, "marking" is allowable; such cases are the blowing up of bridges, making barricades, defending walls and crossing fields, which latter, owing to injury to crops, must be avoided. Should work of the above description be marked, then the troops concerned must

apply to the nearest umpire, who will give his decision regarding the work executed, and see that the enemy pays due regard to the case in question.

Infantry fire effect is influenced by various considerations, such as the distance at which the enemy is, and the correct estimation thereof, the nature of the object aimed at, the intensity and duration of the fire, fire discipline, and any surprise or disturbing element caused by the enemy to the troops that are engaged.

When opposed to a well conducted, severe and steady rifle fire, closed bodies of troops in the open can only get up to 600 or 800 mètres, or move to a flank when the fire of their own skirmishers has in a measure equalled that of the enemy. Closed bodies of infantry, even when covered by strong skirmishing lines, can only move backwards or forwards over the fire-swept zone under 600 paces. A halt made for any length of time within this zone without cover, will at once necessitate an umpire's decision.

At distances under 300 mètres, the decision on the fire fight of skirmishers in the open must be speedily given, so that either the bayonet attack may be carried out or one side falls back.

Bodies of cavalry can appear only in attack formation, in front of infantry that is in hand, within a distance of 800 mètres, be the infantry either in close or extended formation. Any other movements or halts made in the open under 800 mètres are to be decided against the cavalry.

Artillery can come into action *under infantry fire* within 800 mètres (875 yards) only under specially favorable circumstances, for instance, behind effectual cover. Should it accompany the advancing infantry to the decisive attack under the above distance, *it must not be prevented from so doing*: the losses consequent on such a movement in actual fighting must, however, be considered when the umpire's decision is given. At shorter ranges artillery, when in the open in action, soon loses its mobility, and from 200 to 300 mètres (219-328 yards) *it can no longer unlimber at all*. An increased effect must be ascribed to flanking infantry fire.

The previous effect produced by infantry and artillery fire must be taken into consideration when adjudging the success of a bayonet attack in the first line. The following points must be noticed: the number of fresh troops which both sides have thrown into the fight; the way in which the fighting has been carried out; the attitude of the enemy and the ground. Further, it is of importance to note whether the attacker has succeeded in attacking a weak position, or in turning a flank. Taking into consideration that the consequences of a hand-to-hand fight of infantry are always accompanied by great loss, decisions must in this case be given one way or another; but the fate of the day need not be considered as decided by a successful or unsuccessful attack of strong infantry masses.

The fleeting course of a cavalry attack increases the difficulty of adjudging the case in question. The umpires must on such an occasion be specially early on the scene.

In adjudging the result, the situation of the enemy and the execution of the attack are specially important considerations after the consideration of the respective strengths. Should hostile cavalry succeed in attacking their opponents while deploying, it can be adjudged victorious when inferior in strength; otherwise great superiority of numbers will not be effective should the leader fail to employ such superior numbers at the right time. Cavalry attacking cavalry should rely less on covering long distances quickly than on delivering a powerful "shock charge, boot to boot," to insure success.

When attacking infantry, it is of still greater importance to take it in flank. In an attack on shaken and weak infantry bodies a deep formation may be dispensed with by cavalry, so that even small bodies of cavalry may reckon on successful action in such cases. Against unshaken infantry, a deep formation and an attack driven home with unison and carried right through, is required. Should the ground not admit of a screened approach or of surprise, then the cavalry must get quickly over the ground which is swept by fire. Should the infantry be tempted to alter its formation, or deprive itself of the coolness indispensable for effective fire action, then it gives the cavalry a great advantage. Such attacks will always be accompanied by heavy loss to the cavalry. Artillery, when on the move, must be considered at the mercy of a cavalry attack, should it be unprotected by the other arms.

Guns in action have to fear most for their unsupported flank.

A frontal attack on guns will suffer heavy loss, but should not be considered impracticable, provided it has sufficient depth.

The final decision should be guided by the consideration as to whether in actual fighting the victorious cavalry would be able to carry off guns or limbers, or else render them useless, or if it has time to insure its success in some other manner.

Attacks of cavalry against cavalry must halt when the opponents are within 16 mètres of each other, which will represent the *mêlée*.

The side adjudged by the umpire to be defeated must fall back in all cases 300 mètres (328 yards) first of all, and in extended order. The victorious side may either rally, or else pursue with their whole force or with part of it: a distance of 100 mètres (109 yards) must be kept. Should the pursued side not be disengaged, or have its retreat covered, then it must fall back without reforming before the victors, so long as the latter pursue in sufficient strength. The umpire must be careful to prevent the pursuit being carried out to too great an extent, and must define a time, according to the nature and strength of the pursuit, during which the defeated force has to consider itself as unfit to fight.

The fire effect of cavalry, fighting on foot, must be considered in a similar manner to that of infantry, with the prescribed limitations (range of carbine, etc.).

As regards artillery action, the point to be considered is whether its advance is screened together with its development being a surprise to the enemy: also, and in general, the choice of the position as

regards effective fire action and cover, and the facility of observing the effect of the fire, and rendering it difficult for the enemy to observe his fire and find the range; further, the distance the guns are from their object, its extent, visibility and mobility, the nature of the fire employed, the duration and rate of fire, the number of batteries engaged on a similar object, and also, finally, the losses caused by hostile rifle and shell fire, with which must be considered the manner in which the limbers are placed under cover.

Fire effect may be assumed to have begun with the first shots, should a correct estimation of the range have been obtained from batteries which have already found the range: otherwise, some time must be allowed for finding the range, and it must be observed that a hurried opening of fire delays the correct finding of the range.

Closed bodies, equal in strength to a company or squadron, can halt in the open only at ranges between 1,500 and 2,000 mètres (1,640—2,187 yards) under artillery fire well sustained and well directed, when such fire is equally taken to task by the artillery of the side to which such bodies belong. Great effect must be attributed to artillery fire when delivered at ranges from 1,500—1,000 mètres (1,640—1,093 yards) on closed bodies of troops in the open. In such cases infantry can only move backwards or forwards in line, unless the ground admits of temporary cover: cavalry cannot move at a walk under such fire.

At ranges of about 1,000 mètres (1,093 yards) artillery can hold out against rifle skirmishing fire; should thereafter strong skirmish lines be allowed to approach to 600 mètres (656 yards) of the guns in action without the latter being sufficiently protected by their own infantry, then the artillery must retire or else become liable to be adjudged unfit to move. Cavalry can appear in front of guns in action under 1,000 mètres (1,093 yards) in closed bodies only when moving at a quick pace; under 600 mètres (656 yards) only when in an attack.

Artillery which has found the range can endanger the unlimbering of a superior number of hostile guns up to a range of 2,400 mètres (2,625 yards). The giving of a decision on the artillery duel at ranges over 2,400 mètres (2,625 yards) is in reality dependent on the superiority in guns on either side, together with the coöperation displayed by the other arms. At ranges of 2,400 mètres and under, even a slight superiority is of great value. During the opening of the action, then, the greater the superiority of one side over the other in number of guns the earlier must a decision be given. Moreover, should the two artilleries be unequal in power, the nearer they are to each other the quicker must a decision be given.

Flanking artillery fire must have much greater importance attached to its effect.

Capturing individual men, taking away led horses and such measures, in order to represent a success, are inadmissible.

The communications made by the umpires regarding the manner in which the enemy's troops are handled must be used circumspectly

and taken every advantage of, according to circumstances, and supplemented by the communications made regarding the troops of one's own side.

Apart from these communications and decisions, umpires must abstain from all other participation.

When decisions are given, all main, laid down principles must be observed only in the light of general aids, as even in maneuvers numerous circumstances are in coöperation which cannot be shaped into definite rules beforehand.

In all decisions special importance must be attached to moral influences, in so far as they obtain in peace, and which show themselves in the front line in the order and steadiness that prevail among the men, and in the assured transmission of orders thereon.

The troops also, against which a decision is given, must, as far as possible, remain assured that the victory has only been given against them as seen from the maneuver point of view, which cannot take into consideration the inner qualities of troops. Useless and premature decisions are to be avoided, in that they unsettle the commanders and militate against the object of the training. When troops are standing opposite each other with grounded arms, they should not be kept long waiting for a decision to be given: in such cases it is more important to decide generally and quickly than that the decision should take the nature of a laborious and time-robbing investigation.

OBJECT MARKING FOR ARTILLERY.

Each battery carries a frame 70 centimetres square (about 28 inches) which is covered on one side with white, on the other with red cloth, and fastened by one corner (in prolongation of diagonal) to a stake 2.50 meters long (8.31 feet).

When the guns are firing against infantry the frame is raised and the red side is shown towards the enemy; when firing at cavalry the white side is shown, and against artillery the frame is lowered

DISCUSSION AND CRITICISM.

A WALKING HORSE.

In the June number of this Journal, Captain Woon, in speaking of quick walking horses, says: "We will all probably be retired for age before seeing one of the former,"—that is, a horse which can walk five miles an hour. If the captain will take Morganton, N. C., in his route, next time he goes north, I will take great pleasure in showing him a young mare, five years old, which can do it in great shape. I have walked her five miles in an hour, over a very hilly road, and on two occasions, one mile in ten minutes.

GEORGE H. MORAN.

THE HELIOGRAPH.

Apropos of remarks on the heliograph, we have a report by Colonel W. J. VOLKMAR, chief signal officer of the Department of Arizona, which shows that a highly favorable idea of the heliograph exists in the minds of many officers, and that extensive experiments are making for the purpose of testing its use. During November last, the first attempts to hold concerted heliograph practice were had. As a result, most creditable to beginners, the Colonel reports sending a test message of seventy-five words and receiving a reply, through six stations each way, in nine hours, not counting one unavoidable over-night detention.

At the same time, reaching squarely for the source of alleged defects, the report goes on to say: "It is only by the clearest understanding and active coöperation between adjoining divisions, as to the exact places of stations, and periodical local and concerted practice between such stations, that entire success of the general heliograph system of the department can be had."

POST INSTRUCTION.

Although the government has a right to expect at least eight hours of work each day from its soldiers, and more than that, that they should feel under obligations to respond at any hour of the day or night, when their services are required, the thing may be overdone. "All work and no play, makes JACK a dull boy," is a good say-

ing; but at the same time a maximum amount of work increases the worth and contentment of both the officers and soldiers.

But an hour of drill, requiring constant attention, is very different from an hour of labor, when the movements are generally free and unconstrained. For this reason I think that short, quick drills produce better results than long ones. On a rough estimate, Lieutenant SMITH would require between five and six hours of drill daily, and this, many will think, is too much.

The lecturer is sound in regard to the saving of time that would result from a general policing on Saturday. When it comes to training horses to trot, is it not the well-bred, ambitious animal, who gives trouble in the troop? Must he not be taught in the troop, and not out of it, just as men must be instructed together in the march, in line or column, at quick or double time?

W. A. NICHOLS,

Lieutenant, Twenty-third Infantry.

ON PISTOL FIRING.

Much is said about lack of time for pistol firing, and about the impossibility of obtaining good results where the number of detailed men is so great, and their duties so many. It would be well to set such arguments at rest by a few plain facts.

First of all, it must be accepted as a fact, that detailed men are as much a part of our system as are the men who perform any other duty. Of course there are some that cannot be reached at all times, but the majority can, and enough men can be trained, to pay for the work performed.

There was a day when the craze of target practice pervaded most of our troops of cavalry, day after day from morn till night. Yet it was not the full cavalryman's duty they were learning; it was simply making riflemen of the men, by ignoring the education of the horses. What this shows is that there is time enough for pistol firing, if we go at it in a whole-souled manner.

It is a little absurd to talk about want of time when there are so many hours in the day that are not used. How many hours of drill have we in the average garrison? How much time in the fall and winter is wasted because it is not in the "drill season?" How do our drill hours compare with those of the European soldier, or with the hours of the laborer? How often do we go into winter quarters to hibernate till spring, as soon as the annual inspection is over?

The question ought to be, not how to get the time, but how to make the best use of what we have. On this there will be a variety of opinions, but there are certain ways of *not* doing it, that all may agree upon. These are such as *beginning* work where another troop has arrived after months of training; going through the work in a perfunctory manner, whereby the instructor's lack of enthusiasm is communicated to the men; encouraging the men to think it is all wrong because it involves an element of danger.

With a short target season the principal difficulty will be to train the horses to stand fire and to approach the targets without fear.

Much of this can be effected while other work is going on. The targets, while not in use on the range, may be set up where they may be constantly seen by the horses. Put targets in the corral, on the road to water, and around the stables, and they will soon become familiar to the horses. Let the horses view the targets, passing in a body on the firing track, that they may gain confidence by association with others. During the drill season let the targets be kept constantly on the ground, and let all charges be directed on the line of targets.

As to teaching horses to stand fire, the well known expedient of firing a few blank cartridges during feeding and grooming at the picket-line, is not sufficiently tried. In the artillery, we hitch our new horses in quiet teams, and gradually bring them near to the firing point. It is accomplished with little difficulty. At all drills there should be some firing. At first this should take place only when the horses are busy with the most rapid gaits; the gaits should then be decreased until the firing can take place at a halt. The line of fire may be brought more and more to the front until a horse will stand fire in any direction. I have seen a troop move forward in closed line at a walk, and the command was given "Commence firing." The firing was to the front of course, over or between the horses's heads, but the line kept moving forward almost as well dressed as at a review, and not a horse showed sign of fear. Having used more than one troop horse which stood fire with perfect steadiness, and having fired a double-barrel shot gun resting between a horse's ears without his flinching, I know it can be done, if we go at it in a rational manner, with patience and perseverance.

Of course there are some troop horses who are not amenable to training and teaching. They are not numerous, and are generally such as have been ruined in their early experience. They should be condemned at once.

If time is short for work on the target range, is there not a whole year which can be devoted to such work as that indicated here, all of it leading up to the final result?

If light-artillery is to be armed with the revolver, as should be done, it should also learn the use of the weapon. The saber *cannot* be used by a light-artilleryman as it should be used. The driver has both hands full with his team to handle, and nothing is more absurd to think of, than his using a saber even if the battery should charge.

The cannoneer is even more helpless, whether on foot or seated on an axle-seat or chest, so that it is now a fashion for only drivers to wear the saber and then only at inspections. The thing to do is to give us the revolver and *make us learn to use it.*

CHARLES D. PARKHURST,
First Lieutenant, Fourth Artillery.

BOOK NOTICES AND EXCHANGES.

REGIMENTAL LOSSES IN THE AMERICAN CIVIL WAR. By Lieutenant Colonel William F. Fox, U. S. V. Albany Publishing Co., 1889.

We are apt to measure the excellence of troops and the terrors of war by the lists of killed and wounded, without taking proper consideration of the numerous other circumstances that should count. The writer frequently warns us that this is the case, and he gives many brief explanations of events, in a way that adds greatly to the interest and value of his work. He gives not only the regimental losses in many varieties of form, but a great mass of other statistics, most attractively arranged, so that we are apt to imagine ourselves reading of the startling changes of battles themselves, rather than a book of statistics. The writer goes by the official record alone, and here, perhaps, he might have done better in some cases, by consulting regimental histories which have been published since the war, with nominal lists of killed and wounded, and which, with every allowance for prejudice, ought to be more correct than the returns made at the time. But whatever criticisms are made, they must be slight indeed, when compared with the value of the entire work. Colonel Fox has rendered a service to the military student, as well as to every American, by his laborious undertaking. It must be that a race is made better by a war which could call forth such a magnificent record of manhood as this. Such examples as are here shown are needed from time to time, to show that decay of patriotism is far off, that our countrymen are not entirely absorbed in the pursuit of gain, and that the dream of a universal peace is not altogether beautiful.

Although there were 10,596 cavalry, killed or died of wounds, the losses of that arm are by no means startling, when compared with those of the infantry. From the nature of the arm and the character of the country, the former was not used as an attacking or delaying force, in the desperate situations that infantry found so frequently. It also happens that a cavalry charge, by its limited area and brief time, will not compare in the aggregate of its casualties, with the steady losses of an infantry command, extending through many hours over changing scenes. It was thus that numerous brilliant cavalry charges, pushed home though they were, against hopeless odds of numbers, have failed to be of record in a book which is devoted to the gallant deeds of our soldiers. On the other hand, full credit is given to

the arduous nature of this service. While the losses of infantry and artillery were divided among a comparatively few battles, the cavalry was in a constant skirmish; almost might we say that they were fighting night and day. The First Vermont cavalry records forty-five engagements in which it suffered a loss of killed and mortally wounded, and as many more in which it sustained a loss of wounded and prisoners, while the times when members were liable to exposure, death and capture cannot be estimated. This reconnoitering and outpost service is the hardest and the least glorious duty of a soldier. The losses in prisoners are also out of all fair comparison with those of other commands. Here, by its isolated nature and exposed position, capture implies generally the venturesome spirit of the rider; there it implies defeat. Thus in the Gettysburg campaign there were 11,000 cavalry in the Union armies, which lost 4,932 in killed, wounded and prisoners. In the Shenandoah campaign, Sheridan's victorious cavalry lost 3,917 out of 12,000.

The author's researches in contemporary military history do not seem to have been profound. Eager to establish that the war of the States was the greatest of the century, he appears to lose sight of some of the elements of a fair comparison. As Americans we might be glad to accept his flattering estimates, but as soldiers we cannot agree with the justice of some of his conclusions. He dismisses the battles of the Napoleonic era in rather a summary fashion, and goes on to say that Meade's loss at Gettysburg was greater than that of Moltke at Gravelotte, with half the number engaged. To reach this conclusion he ignores several important points, and among others, the fact that Gravelotte was fought in twelve hours and Gettysburg during three or four days. He might also have stated that the German loss from about noon of the 16th until night of the 17th of August, was over 36,000, with 1,460 missing, and that Meade's loss was 23,000, with 5,434 missing.

The most stubborn field of the Franco-Prussian war was Vionville-Mars la Tour. Our bloodiest day was that of Antietam. The Germans had about 58,000 engaged and lost 15,799. McClellan had about 60,000 engaged and lost 12,410.

The writer makes another mistake when he would compare the loss of a German regiment of 3000 men, with that of one of our own regiments of several hundred. At Mars la Tour the five battalions of the Third Infantry Brigade went into action with ninety-five officers and 4546 men and suffered a total loss, including some 370 prisoners, of seventy-two officers and 2542 men, consequently nearly sixty per cent. of the original strength—the proportion between killed and wounded being as three to four. This might be placed beside the heaviest losses of American troops with no detriment to Teutonic valor. The heaviest losses of divisions and brigades recorded by Colonel Fox are: Hancock's Division, Fredericksburg, 2,029 out of 4,834; Longstreet's Division, Gaines' Mill and Glendale, 4,438 out of 8,831; Harrow's Brigade, Gettysburg, 763 out of 1,246; Garnett's Brigade, Gettysburg, 941 out of 1,427.

The author's authority on the loss of the Third Westphalian Regiment at Mars la Tour differs from the official account of the German staff. The loss is there given at 1,785, and other figures make it probable that the regiment numbered not over 2,700; this would give a loss of sixty-six per cent. In that regiment there were twenty-seven officers killed, twenty-one wounded and one missing; a loss of ninety per cent. if every officer stood in his appointed place on that afternoon.

Similar examples are not wanting in other wars. Thus the Russian losses in the third assault on Plevna were 18,216 killed and wounded, out of about 60,000 engaged, and Skobelev lost 8,000 out of his 18,000* in his battle on the Lovtcha road.

These figures are given to show, not that our troops displayed less steadiness, but that others have shown it as well. It is a fact that good soldiers, well led, will fight well at all times, whatever their race, creed or color. This is abundantly proved in this very book, by such examples as the Irish Brigade, which lost more men in killed and wounded than it ever mustered at any one time, by the record of the colored troops, the "German Rangers" and the "Highlanders."

The author again shows a disposition to elevate our gallant soldiers somewhat unduly above others when he says that the Germans in France lost 3.1 per cent. in killed and died of wounds, and the Americans 4.7 per cent. on one side and over nine per cent. on the other. Truly no comparison like this was necessary to show the staying qualities of our countrymen. Especially should it be remembered that the war of 1870-71 lasted only six months and that our losses were scattered along through four years.

Colonel Fox views the war principally from a northern point of view. He has not failed, however, to make a careful study of Confederate records and to give abundant credit to that side. He deplures, as a good soldier should, the fact that these records are so incomplete, and that so many meritorious instances of American pluck should lie in the unrecorded history of the cause that was lost.

Narcissus, we are told, became enamored of his own image and pined away and died of love. There is an evident danger into which we too may fall while contemplating the beautiful spectacle of our countrymen in war. The fact that American volunteers fought so well is cited as an argument that they would do so again if called to arms, and the fallacy is advanced that armament and an organized force are therefore unnecessary in time of peace. But the veterans of 1863 can never be mustered for another Gettysburg. Three years of war were needed before they formed their steadfast lines on that day. Another 1861 will see as tall skeddaddling, as helpless blundering and as improvident a waste of treasure as there was thirty years ago. As a consequence of well directed military training in time of peace look at the men of Westphalia, three weeks after they left their farms and counting-houses, holding the hedges and vineyards north of Mars la Tour against two corps of infantry. Who can

* Forbes says 15,000.

say that such a thing can be done in this country? If so we are better than our fathers, for our military training is about the same.

It is well enough to feel pride in the excellence of our volunteer army, but there were many things wrong in the system which brought about that army, and in which we may learn good lessons from the conscripts of Europe. In our own volunteer army, called out, not by the ambition of kings, but to fight for a principle, there were nearly twenty-five per cent. of desertions; abroad this crime is almost unknown. What we need is a system of training applied to regulars and militia in time of peace that will make them able to repeat their best deeds if occasion should call. Above all we must not imagine that any land can furnish soldiers, like the dragon's brood of the fable, who sprang, full grown and armed, from the furrows of the field. We must realize the fact that many other lands possess soldiers, who, for purposes of war, are at this instant far better than our own.

A second edition should include Colonel Lew. Benedict, 162d New York, in the list of brigade commanders killed on the field; it should also correct the middle initial of Stonewall Jackson's name.

GREAT CAPTAINS—ALEXANDER. By T. A. Dodge. Cambridge: Riverside Press. 1890.

A MANUAL OF GUARD DUTY. By Lieutenant L. W. V. Kennon, U. S. Army. Cambridge: Riverside Press. 1890.

HANDY LISTS OF TECHNICAL LITERATURE. Milwaukee: National Publishing and Printing Co. 1890.

FORTY YEARS A FILE CLOSER. By Captain Minus Wonbar. Washington: Chapman.

COLBURN'S UNITED SERVICE MAGAZINE. January 1890.

Weapons of War. The Welsh Border. David Deen. Kuram Valley. A Soldier's Friend. Returned Empties. The Volunteer Force of India. A Perilous Incident in China.

JOURNAL OF THE ROYAL UNITED SERVICE INSTITUTION OF INDIA. Vol. XVIII, Number 78.

A Trip to Bokhara. The Aka Expedition. Horse Breeding Operations. Musketry Fire in the Hills.

UNITED SERVICE INSTITUTION OF NEW SOUTH WALES.

Inaugural Address by the President, Major-General Richardson, C. B. Lecture IV—The Clothing of the Soldier as Suitable to the Climate. Lecture V—The Maxim Gun. Lecture VI—Naval Attack on a Protected Harbor.

ARMY AND NAVY GAZETTE.

Volume XXX., 1889: General Brackenbury on Street Fighting—931. Military Prisons and Military Crime—948. An Advance in Musketry—965. The Portugese in South Africa—967. Canadian Horses—967. Lord Wolseley and the Volunteers—967. Count von Moltke—977. The Pinto Episode—1008. The Ordeal of Battle—1034. Volume XXXI, 1890: The French Helmet—5. Supply and Transport in 1889—41. The Adjutant-General on an American Barrel Organ—81. The United Service Institution and Aldershot Military Society.

JOURNAL OF THE ROYAL UNITED SERVICE INSTITUTION. No. 151, 1890.

Military Training of Boys. Horse Breeding in Australasia. The Cavalry Division as a Body in the Fight. Extracts from an Infantry Captain's Journal.

PROCEEDINGS OF THE ROYAL ARTILLERY INSTITUTION. Volume XVII. Numbers 7 and 8.

The Dutch Field Artillery. A March of Royal Horse Artillery from Neemuch to Mhow, 1889. The German Field Artillery Drill Regulations: *Part 4; The Fight*. The Influence of Smokeless Powder on the Tactics of the Battlefield. The French Artillery. Army Customs, One Hundred Years Ago. A Breech-Loader for Mountain Artillery. The French Mountain Artillery in Tonkin, 1883 to 1887. The Swiss Artillery. The German Rules for Umpires. Old Recruiting Notices.

ILLUSTRATED NAVAL AND MILITARY MAGAZINE. December 1889 and January and February 1890.

Great Commanders of Modern Times. *Turenne—Marlborough. Naval Warfare, VI, VII and VIII. Military Topography by Captain Verner, II and III. Wanderings of a War Artist. Boxing. Artillery at the Paris Exposition. Polo in India. Epochs of the British Army. Imperial Colonization. Battle of Edgehill. The American War.

REVUE DU CERCLE MILITAIRE.

1889, No. 47: An Episode of the Retreat from Moscow. National Songs and Military Music. The New Colt's Revolver and the Cart-ridge Pack. No. 48: The Moral Education of the Russian Soldier. The Defense of Plevna. No. 49: Smokeless Powder; Its Influence on Tactics. No. 51: Osman Pasha. No. 52: The Moral Education of the Soldier, and Particularly of the Trooper. Military Cycling in Denmark. Letter from the U. S. 1890. No. 2: A German Study of the French Army. Cavalry and Smokeless Powder. No. 3: The Cossacks of the Oural at Home and at War. No. 5: Night Attacks.

MILITAER-WOCHENBLATT.

Series 1889, Nos. 86 and 87: Tactical Retrospect on the Use of Artillery in the Battles of the Franco-Prussian War. No. 91: Smoke-

less Powder and the Combat. The Lance. No. 92: Cycling Exercises in the English Army During the Fall, 1889. No. 93: Smokeless Powder and the Field Artillery. No. 94: Experiments to Determine the Velocity of sound. No. 95: Hints for Conducting Infantry Fire against Infantry, Cavalry and Artillery. No. 106: Smokeless Powder and the Attack. Series of 1890: The Fifth Squadron of French Cavalry Regiments—32. Instruction of Cavalry—14-143. A French Opinion of the Achievements of the German Cavalry During the War of 1870-71—88. The Dismounted Action of Cavalry—313-403. The Lance—267-373. Remarks on the Instruction of Field Artillery in Riding—49. Refractory Horses—114. Remounting of the Russian Cavalry—152.

The Italian Army in the Autumn of 1889—26. The Effect of the Ricochet Fire of the French Infantry—33. The Territory of the Ural Cossacks as a Center of Horsebreeding—61. The Penetration of Bullets of Small Caliber and Shelter Trenches—77. Examination of English Officers in Foreign Languages—94. Tactical Retrospect of the Battle of Gravelotte, with Special Reference to the use of Artillery—103, 137, 175, 261, 294. Additional Cavalry Regiments for the French Army—181. Drill Regulations for Infantry.—Edition of 1889—171. Peculiar Disease of the Hair among French Soldiers—187. Esteem of Foreign Military Men for the Writings of Prince Hohenlohe-Ingelfingen—236. Fire Tactics for Infantry—225. Smokeless Powder and Field Artillery—326. Fortresses of Germany—341. Reply to Several Passages in the Article, "Hints on the Management of Infantry Fire"—347. Health of the English Army—349. Desertion in the Army of the United States—350. Three Thousand Versts on a Velocipede—353. Quick Firing Cannon—360. The Marshals of France—393. The Improvements in Fire-arms and the Offensive—397. Improvement of the Rifle—415. The Military Department of the Paris Exposition—426, 455.

JOURNAL OF THE MILITARY SERVICE INSTITUTION. Numbers 42 and 43.

Military and Naval Pensions in the U. S. Danger from Lack of Preparation for War. Mackenzie's Last Fight with the Cheyennes. Mountain Artillery. A Trip to India, China and Japan. Heavy Artillery Target Practice. Esprit de Corps. Development of Submarine Mines and Torpedoes. Instruction of Non-Commissioned Officers. Military Instruction of our Youth.

PROCEEDINGS OF THE U. S. NAVAL INSTITUTE. Vol. XV, No. 4. 1889.

Description of the Works of the Bethlehem Iron Company. Our Future Navy. Steam Trials of the Lepanto. Management of Boats in Surf.

THE UNITED SERVICE.

December 1889. The Evolution of the Torpedo Boat. One View of the Army Question. The U. S. Revenue Cutter Service. The Annual Inspection of the National Guard by Army Officers. January 1890: Our Coast Defences. Modern Naval Education. Individual Dis-

cipline of the National Guardsman. Some Cavalry Leaders. February. 1890: Some Glances at the Wars of Tomorrow. Our Coast Defences. Notes on National Guard Staff Duty. Operations Before, and the Fall of Atlanta. March 1890: The Indian as a Soldier. National Guard Staff Duty. Great Commanders of Modern Times. Battle of Thompson's Station and Trial of the Spies at Franklin, Tenn. The Trials of Staff Officers.

PENNSYLVANIA MAGAZINE OF HISTORY AND BIOGRAPHY. No. 4, of Vol. XII. January 1890.

Pennsylvania and the Declaration of Independence. Autobiography of Robert Proud, the Historian. Governor Pownall's Reasons for Declining the Government of Pennsylvania, 1758. Letters of William Penn to John Aubrey.

HUDSON'S ARMY AND NAVY LIST. December 1889, January and February 1890.

THE NATIONAL TRIBUNE. Weekly. Washington, D. C.

THE INVENTIVE AGE. Weekly. Washington, D. C.

THE SPIRIT OF THE SOUTH. Weekly. New Orleans, La.